NATURE STUDIES AND FAIRY TALES.—I.

C. I. DODD

NATURE STUDIES

AND

FAIRY TALES

For Infant Schools and Lower Classes
Based on the theories of Froebel and Herbart

BY

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WITH A PREFACE BY

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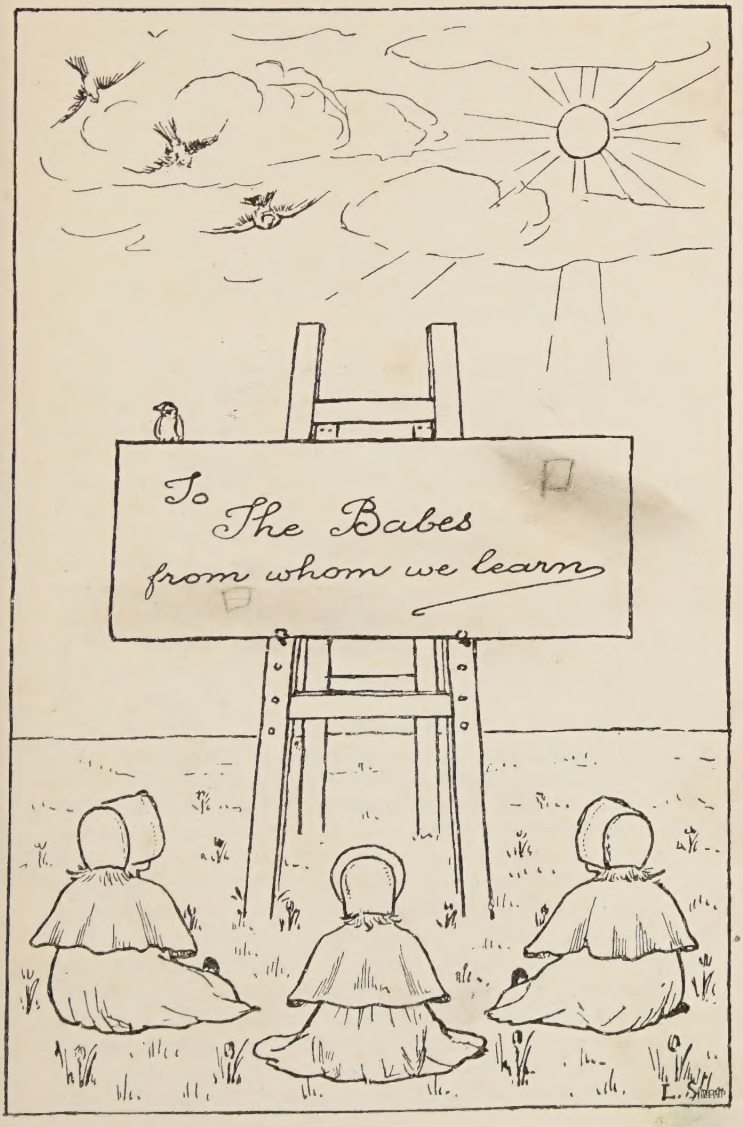
To
The Babes
from whom we learn

"Nature, as well as all that exists, is the declaration and revelation of God."—FROEBEL.

"Then Nature, the old nurse, took
The child upon her knee,
Saying, 'Here is a story-book
Thy Father hath written for thee.'"

LONGFELLOW.

"Come forth into the light of things,
Let Nature be your teacher."

WORDSWORTH.

"For I was reared
In the great city, pent 'mid cloisters dim,
And saw naught lovely but the sky and stars."

COLERIDGE.

"And to the old painter, with his wild, weird, mysterious instincts and ancestors, literature meant the Bible, legend, poetry, myth; it meant essentially imaginative literature—fairy tales, an it please you."—RUSKIN.

PREFACE.

Miss Dodd has done good service to infant instruction by adding to its growing literature the book to which these remarks are prefixed by way of introduction.

She has written already on the subject, but never before on the organized plan, nor with the fullness of treatment of both principles and practice, which characterize this volume, and which will make it of special value to teachers of infants, and should render it most useful to students of educational methods generally.

It consists of two main divisions: one of them she has devoted to the statement of the main principles which should underlie and constitute the bed rock of infant instruction; the other contains the illustration of those principles in a series of concrete examples. The language is simple, bright, and full of life; and nothing is said which has not been put first to the test of experiment. So that the student is enabled not only to perceive clearly what the underlying principles are, but also to see how in practice to give them effect and realization. And this is just what our students most need; for they either learn principles without their practical application, or they learn to practise methods without understanding their nature or meaning.

The due correlation of studies is in the first place insisted upon and explained—that is to say, grouping around a central subject such other subjects as have any material or moral relation to it; the opposite of that other method which isolates it from all relationship, and treats it by itself, to the loss of interest, mental growth, and formation of true intellectual character and habit. Its treatment is peculiarly happy, and is well calculated

to open the students' eyes to see what, though so necessary and elementary, is still so little understood. Miss Dodd has dwelt upon its importance at some length, but has said not a word more than the subject deserves.

The essentials of instruction are then dealt with. They are shown to consist of two groups of studies—the humanistic and the scientific; that is to say, those which have regard to the life of mankind, and those which are connected with nature. Under the former are included moral instruction, and instruction in art and language; under the latter, the studies of natural science.

The necessity of the union of these two branches is dwelt upon with much energy and force, and illustrated by numerous examples. The principles of Froebel and Herbart are shown to be the backbone of the system, which is to lead the child through its two avenues up to a living, reverent relationship with nature and to God.

The value of fairy tales as an educational instrument is then touched upon, and with them the author includes sagas and folk lore. Their value, she argues, lies in their power to quicken the imagination into a creative activity, into sympathy with natural objects, and to awaken the historical emotion. One cannot but feel how much need there is to develop and utilize such instruments as these in our infant schools, where so much of the instruction remains dry, disconnected, and is based upon the old-fashioned method of pouring information into minds unprepared to receive it.

A chapter is next devoted to the proper relation of the fairy tale to nature study. The former is the dramatizing of the latter; so that the nature study may attain its fullest aim of fixing firmly in the child's mind, by the action of psychological law, all that should be remembered about it, and that the symbolism of nature may be understood as far as possible, with its moral teaching as well.

The above is but the barest, briefest outline of the truths Miss Dodd desires to enforce in the chapters I have endeavoured to summarize. A careful perusal of them will well repay the reader, who will rise from their study with his mind expanded and informed, and, it is hoped, with a solid respect for the educational systems of two great men, which have suffered through

the misapprehension of them arising from their imperfect and mechanical treatment at the hands of ignorant teachers.

The road along which we are led in this book is the natural road, for it follows the line of the child's mental states at different stages of development; and we surely can have no better index to guide us than the one nature affords. The child's happy leading must be a safer, surer way than to push him along the line of the greatest resistance prescribed by the curriculum of studies framed on the logical rather than upon the psychological order of sequence.

A large portion of the book is devoted to the development, in a series of concrete illustrations, of the method of working out the principles laid down in its earlier pages. It gives lists of subjects suitable for lessons in nature study, folk lore, and fairy tales; and in lessons carefully drawn up are demonstrated the best methods of making the teaching productive of result. In them it is shown how to combine the fairy tale with nature study, how to kindle imagination and to quicken moral sentiment, to impart something of the literary and artistic spirit, and to train hand and eye into some definite state of manual skill.

There is throughout the book no stress laid upon (indeed, no mention even made of) the results of this teaching to be measured by examination tests. The system does not admit of them, since it is concerned exclusively with the far more important work of giving stimulus, of creating good habits, of forming character, moral as well as mental, by means of the combined play of a number of well-adapted forces upon the child's mind, the stage of whose growth is a prime factor in determining the nature and quality of these forces.

The book will doubtless receive the serious consideration and attention it deserves, and will fill a place at present vacant in the sphere of infant teaching.

W. Scott Coward,
H.M. Inspector of Training Colleges.

INTRODUCTION.

THE Studies in the following pages are more than theoretical lessons sketched by a mature mind. They have originated in the kindergarten and class-room, and have formed the plan of lessons given in spring by students and teachers to the little ones in the Primary School and Kindergarten, Manchester. This school is a practising school for the women students of the day training department of the Victoria University of Manchester, and the curriculum and methods of teaching are based upon the theories of Herbart and Froebel. The subject-matter selected to put before little children ought to be inspiring and familiar, and the fairy tales and simple studies from nature best meet these requirements.

CATHERINE I. DODD.
March 1904.

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NATURE STUDIES AND FAIRY TALES.

PART I.

THEORY OF THE SCHEME.

CHAPTER I.

CORRELATION.

"History, you have heard me say a thousand times, is the basis of all true general knowledge."—CARLYLE.

"He would be a foolish teacher who would give a child a number of disconnected things to do at the same time."—SULLY.

"Enrich your teaching with as many relevant associations as possible."—LAURIE.

RECENT changes in our methods of teaching little children have chiefly been in the direction of simplification. The tendency to adapt the instruction to the child's capabilities and desires is increasing, and we are endeavouring to get rid of elaboration of detail, overloading of curriculum, over-cultivation of verbal memory, and dull text-books, at least in the lower classes of our schools. All these were signs of defective method and imperfect comprehension of child nature. Suggestive hints on the teaching of little children have been thrown out by great men from Plato downward; but these, for the most part, fell upon deaf ears. Rousseau

insisted that freedom and happiness belong to the period of childhood, and that the child must learn from experience and not from books. The influence of Rousseau first led Pestalozzi to simplify the elements of knowledge, and to attempt to adapt them to the child's capacities. Froebel impatiently discarded all formal studies with children of tender years, and based his early instruction on games, stories, and nature study. "Never forget," he says, "that the essential business of school is not to teach a variety and a multiplicity of things, but to give prominence to the ever-living unity that is in all things." The followers of Herbart, too, strive after unity in school studies, and they base all early instruction on the contents of the child's mind, gathered from its experience of its environment and its human relationships. This idea of unity is simple and far-reaching; yet it finds its way very slowly into our English schools.

Teachers are a conservative race—they love to plod along in the ruts made by tradition; and true educational principles may lie undisturbed in mouldering volumes for a century or so before teachers will consider or apply them.

"Some of you talk in a jargon of your own," said a teacher of ten years' standing, at a recent educational conference. "What does *correlation* mean?" Somebody explained to her the idea of inner connection between school studies, and she replied, "It is too visionary, and such a scheme of studies would be fatal to the present system of examination." It is a common mistake in the school world to imagine that schools exist for the sake of examinations rather than for the sake of the child.

The following is an exact account of a recent morning's work in Standard I., in a town infant school, one bright spring day:—

Reading Lesson.—How Sponges Grow.
Recitation.—"Winter Snows."
Object Lesson.—The Camel.
Brushwork.—Painting Poppies.

The sun was shining, and a great bowl of daffodils stood on the teacher's desk; but it never seemed to occur to her that the season or outward circumstances should influence the morning's studies. The sixty little boys and girls read about sponges because this happened to be on the next page to the last lesson in their reading book. The lesson was particularly inappropriate, because the children had never seen the sea, and the subject of sponges was totally unrelated to anything in their school instruction, environment, or experience. A few pages further on was a lesson on the way seeds grow. The teacher was asked if this would not be a more appropriate reading lesson, inasmuch as it was in accord with the springtime, the season when the seeds burst into growth. She replied that it was a bad habit to allow children to skip lessons in their reading books.

The children recited "Winter Snows" because it was a part of the work planned out for the year; and, for some reason, the poem had not been learned earlier.

The lesson on the camel was given because it was one of a series on large animals. It was presented to the children in a purely formal manner, and no attempt was made to connect the lesson with any other matter in the child's experience or knowledge, or to compare or contrast the camel with any other animal. The whole matter was discussed and done with in twenty minutes. The children were told that the camel had "a hump or two humps;" that it "carried water in its pouch;" and that it had the "power of feeding on the fat of its hump." They accepted these statements indifferently. They comprehended neither the camel, nor the hump, nor the manner of feeding; but they were not interested enough to ask questions. The children painted poppies because red paint was plentiful, and the stock of other colours had run short. As the bowl of daffodils stood before the children, it was suggested to the teacher that it might be appropriate to paint them. She remarked that they had learned to paint daffodils in January.

With a very small effort this teacher could have introduced some harmony into the children's studies; but the idea never occurred to her, and suggestions were received with indifference. There were the text-books, and there was the time-table, and these were rigidly respected. That was enough.

This attitude of indifference is not entirely the fault of the teachers. Primary education was for many years subjected to a steady repression of initiation and spontaneity. Teachers were required to drudge drearily at the task of filling the children's minds with dead forms of knowledge; and now that a certain amount of freedom has come, it is difficult to recover all at once that elasticity of mind which is essential to vigorous growth and development.

The introduction of kindergarten work of recent years into our infant schools has done a great deal to brighten the teacher's work and bring joy to the children; but Froebel, like all great men with many disciples, has been grievously misunderstood, and his teachings have often been misapplied. Besides, the infant schools of the past were bound by stringent rules, and the difficulty of trying to graft a fresh vital system upon an old mechanical one led to many errors.

The idea of unity or inner connection between school studies is by no means new. All rare souls—heaven-born teachers—grasped the idea intuitively, and many lesser ones have groped after and found it. More than two centuries ago, Comenius, who was perpetually haunted by the idea of "the connection of knowledge," writes: "We see that the branches of a tree cannot live unless they all alike suck their juices from a common trunk with common roots; and can we hope that the branches of wisdom can be torn asunder with safety to their life—that is, to truth?"

Good old John Bunyan once wrote a natural history in rhyme for boys and girls. It is a quaint production, and we may perhaps be pardoned if we prefer his prose to his poetry. In this work the animals are somewhat unfairly

treated in being used only to point appropriate morals. We have a fuller sense of the beauty of nature now than our forefathers had in those old Puritan days, and we are not afraid to teach our children to wonder at and admire all God's creatures. Bunyan's quaint work is called "Divine Emblems; or, Temporal Things Spiritualized." He is convinced that spiritual truth is the one thing needful, and he makes it the centre of all his teaching; in the matter of connectedness he shows himself a true teacher. He treats of the frog as follows:—

> "The frog by nature is both damp and cold,
> Her mouth is large, her belly much will hold;
> She sits somewhat ascending; loves to be
> Croaking in gardens, tho' unpleasantly."

Comparison:—

> "The hypocrite is like unto this frog,
> As like as is the puppy to the dog;
> He is of nature cold, his mouth is wide
> To prate, and at true goodness to deride.
> He mounts his head, as if he was above
> The world, when yet 'tis that which has his love;
> And though he seeks in churches for to croak,
> He neither loveth Jesus nor His yoke."

This is accompanied by a delightfully quaint outline illustration of the frog holding her head in the air, which the little Puritan girls and boys must have loved to copy as they conned the rather libellous lines connecting the poor frog with the awful picture of the hypocrite.

Dear John Bunyan! he grasped many educational truths. He knew the value of allegory and comparison as well as that of correlation, and though not consciously writing for children in his "Pilgrim's Progress," he did more for them in producing this work than any other writer, except, perhaps, Defoe.

William Jones of Nayland (1726–1800), whom Southey calls "that wise and good man," published in 1792 an attractive little book which ran through many editions

It is called "The Book of Nature; or, The True Sense of Things Explained and Made Easy to the Capacities of Children." He believes that the language of the Scriptures forms the true concentrating core of a child's instruction.

In a series of lectures on the "Figurative Language of Scripture," he says: "So plain is this sort of teaching, and so effectual, that if I were to begin with the first elements of instruction to a child, I would teach this ideal language in preference to all the languages in the world, for this is the life and soul of all the rest."

The good man writes a series of lessons on "The Beasts," "The Eel and the Lark," "The Fading Flower," "The Bee," etc., and his object is to group his instruction around texts of Scripture. He treats the animals somewhat inadequately; but as his aim is to subordinate natural history to moral instruction, this may perhaps be pardoned.

He begins:—

"The ass hath very long ears, and yet he hath no sense of music, but brayeth with a frightful noise. He is obstinate and unruly, and will go his own way, even though he is severely beaten. The child who will not be taught is but little better; he hath no delight in learning, but talketh of his own folly, and disturbeth others with his noise."

He goes on to discourse in like manner of the dog, the fox, the wolf, and the adder.

His texts are chosen because of their accidental allusions to various animals, and are to be learned by heart without any explanation apparently:—

"A bridle for the ass, and a rod for the fool's back" (Prov. xxvi. 3).

"Go, tell that fox" (Luke xiii. 32).

"Many dogs have compassed me about" (Ps. xxii. 16).

"That old serpent, called the Devil, and Satan" (Rev. xii. 9).

"Ye shall have in abomination among the fowls the owl and the bat" (Lev. xi. 13).

His questions are very quaint and strenuous :—

Q.—What is the child who will not learn?

A.—An ass, which is ignorant and unruly.

Q.—What are wicked men, who hurt and cheat others?

A.—They are wolves and foxes and bloodthirsty lions.

Q.—What are liars?

A.—They are snakes and vipers, with double tongues, and poison under their lips.

Q.—For what end did God make the lark and the dove?

A.—To teach us what we ought to be.

Q.—Why did He make owls, bats, and swine?

A.—To teach us what we ought not to be.

In spite of its fearful warnings, this book is interesting. The writer's insight led him to use concrete examples, and to group his teaching around one central idea, and we can imagine small boys and girls being fascinated and awed by the strength and severity of his conclusions.

From Bunyan and William Jones to Froebel is a far cry. Froebel's treatment of nature is wholly unlike that which grew up under the Puritanical influence. Bunyan and his imitators wished the child to hate evil, by discovering fancied resemblances to it in God's creatures. Froebel believed that a sympathetic study of nature exerts a strong moral influence upon the child; so he takes him to nature, and through its wonders reveals the greatness and goodness of the Creator. He would have us fix the child's attention on the beauty, order, and mystery of nature, rather than on its ugliness and abnormality. He would have mothers and teachers take the natural objects lying around the child—the lily of the valley, the mouse, the butterfly, the bird's nest, the snowflake, the seed in spring, the fruit in autumn—and show through these the love and care of the Almighty. He wished to lead the child to love God by a loving study of His works. Froebel saw with great clearness of vision the unity between God, nature, and man; and he taught that

nature was the best revealer of God to the child. He is very clear on the necessity of establishing relationships among school studies for the sake of promoting unity and harmony in the minds of the children. Therefore the school studies are arranged around a central point, which the season of the year or some interesting local event suggests.

The following is a scheme of lessons for the month of June, arranged and given by students of Froebel.

The nature studies are the predominating feature, and the season of the year suggests them.

CENTRAL IDEA: PEAS AND BEANS. MONTH: JUNE.

Object Lessons:—

1. The pea flower.
2. The bean flower.
3. Comparison of pea and bean flower.
4. Other "butterfly" flowers examined.
5. The development of the pod.
6. Examination of ripe pods.
7. Pea and bean plants compared.
8. Shelling and cooking peas.

Drawing Lessons:—

1. Pea leaf.
2. Bean leaf.
3. Pea pod.
4. Bean pod.
5. Watering-can to water peas.
6. Dish to contain the peas.

Colouring Lessons:—

1. Pea flower painted.
2. Bean flower painted.
3. Open pea pod.
4. Open bean pod.
5. Design of pea flowers.

Modelling:—

1. Leaf of pea plant.
2. Pea pod.
3. Dish to contain peas.
4. Watering-can.

Song:—

"The Little Gardener."

Stories:—

1. "Jack and the Bean Stalk."
2. "Little Pea Blossom."

Arithmetic:—

Easy problems in addition and subtraction, using peas as concrete objects.

Finger-work:—

Fences, chairs, and tables made of softened peas and laths.

Froebel believed that a proper study of nature laid the true foundation of character in the child. He values literature and history chiefly as supplementary aids to nature study in training the child's character.

Froebel planned a definite scheme for the education of humanity through the four periods of infancy, childhood, youth, and manhood; but he did not live to work out the details of his system beyond the first period—the kindergarten stage.

He insists on *sequence* in studies as well as *connectedness*. He considers the work of each school year as an organic whole, and the work of each day, week, and month must be logically related to that whole; while the work of every school year ought to accomplish a definite work in the child's development, and lead on naturally to the next year's work.

Froebel's idea of "connectedness," and, to a lesser extent, his idea of sequence of studies, have been applied in many of our kindergartens and primary infant schools with good results. Much, however, remains to be done. With regard to schools for older scholars, the haphazard method of crowding the curriculum with unrelated subjects still prevails. Children are expected to acquire a certain amount of knowledge, and attain to a certain degree of skill, to meet the needs of conventional examinations; hence the true aim of education — the harmonious development of the human being, body and soul—is frequently overlooked.

The followers of Herbart attach considerable importance

to what they call "concentration of school studies." This is one of their chief articles of educational faith. They point out that school studies are, from their very nature, closely related; that literature has many connections with history; history with geography; geography with science; science with arithmetic, geometry, and so on; also that drawing, painting, and various forms of hand work may be associated usefully with the various school subjects. Judicious selection of essentials is the principle of a concentrated scheme of studies. It is urged that the concentration of school studies increases the child's interest, ensures thoroughness of work, and aids in developing a logical memory. A carefully-concentrated scheme of studies also lightens the pressure thrown upon the time-table, by getting rid of much irrelevant matter imposed by the text-books.

Above all, Herbartians insist that the concentration of studies tends to strengthen character, because strong and consistent conduct depends upon the unity of ideas existing in the mind. Hence they endeavour, as Froebel did in his kindergarten, to make the school curriculum an organic whole. They believe that the child passes through various stages of culture in his growth from infancy to youth, and that the school studies of each year should be logically connected, in order to aid his development. Their problem is not easy. They select for each school year the material which they consider accords with the child's stage of development, they connect all the subjects into an organic whole, and they arrange that the logical sequence of each school subject should be carried on from year to year. It will be readily seen that the selection of an adequate central subject—"core of concentration"—which shall dominate the whole scheme of studies is a matter of profound importance.

In all discussions on the correlation of school subjects the question of the central subject has been a weighty

problem. In choosing this we ought to be guided by various considerations :—

First, the ethical worth of the subject.

Second, the number and closeness of its relations with other subjects.

Third, the necessary sequence.

Froebel is credited with having made nature study his central subject. He is convinced that the ethical value of this subject is great, and for young children, at any rate, there are plenty of relations with geography, history, literature, and other subjects. We certainly cannot be followers of Froebel unless we accept the study of nature as one of the essential articles of our educational creed, and much of the kindergarten work in our primary schools lacks vitality, owing chiefly to our very imperfect conception of the study of nature. The Americans have done more in this matter of recent years, hence their success in teaching little children.

Nature study, however, it has been urged, has no necessary sequence. One is guided in selecting subjects chiefly, in the early stages, by the child's environment and the seasons of the year; but the choice is arbitrary, and the topics are loosely related. The squirrel, the horse-chestnut, the plum, and the mole are of equal importance to the country child, who is familiar with these things, just as the crab, or the sea-gull, or the starfish may be equally well studied by children at the seaside. When geology, botany, or zoology is systematically studied in later years, a necessary sequence is followed; but in the early studies this sequence is lacking.

Some of Froebel's followers contend that he did not make any one subject the connecting centre. Others affirm that he made the child himself and his needs the true core of connection : this, of course, would necessitate a separate scheme of studies for each individual. Others, again, say that he considered mathematics to be the true centre. This last may be true; for inasmuch as he worked out with beautiful

precision concrete problems of geometry with the young child, and as geology, physics, chemistry, and kindred subjects are intimately connected with mathematics, he may have had in his mind a scheme for unfolding the subject in its many connections throughout the later periods of education, which he never worked out in detail.

In Switzerland and in America, geography is sometimes looked upon as a convenient connecting centre. Karl Ritter, the founder of the *science* of geography, who visited Pestalozzi at Yverdon, was struck by the possibilities of geography as an *associative science.* He wrote, after his visit: "There is between nature study and history a great gap to be filled up, and I am firmly resolved to fulfil the promise I made to Pestalozzi to apply his method to geography." Ritter, in his great work on the subject, shows the relations of geography to nature and to the history of man. This work has inspired much of the best geography teaching since his day, and enthusiasts urge that the subject is capable of appealing to the imagination, of affording moral discipline, and arousing interest, equally with history.

It is urged against geography, however, that it lacks ethical content and logical unfolding in definite sequence; for geography has no long series of closely-connected thoughts which may be gradually unrolled year by year throughout the school course. But it is certainly true that geography has a large number of relations with other school subjects.

Suggestions have come from manual-training enthusiasts urging that modelling, drawing, or painting should be the leading features of the school curriculum. For young children some pretty schemes might be worked out; but much as we may value hand and eye training, no one would seriously wish to make it the dominant note throughout the entire school course.

The Humanistic Centre.—The Herbartians make history and literature the leading note in school instruction. Humanistic studies, they affirm, have a necessary ethical content,

and a series of close relations with other school subjects, as well as a necessary sequence. The events in the humanistic studies are linked chronologically, and the sequence could not be greatly varied.

History and literature are also closely associated with language, and the importance of the study of the mother tongue for younger children cannot be too strongly emphasized.

In the lower classes of the school the Herbartians give the place of honour to the study of the mother tongue, and the history and literature of the mother country, and these give way to the study of other languages and literature and general history in upper classes. That the staple of every child's education should be the language and literature of his mother tongue, is one of the fundamental principles constantly emphasized by Luther, Pestalozzi, and others, who have considered the education of children a matter of profound importance to the State.

The Herbartians hold that literature and history educate the religious sentiment, develop individual and social sympathies, and train the judgment and the moral and æsthetic senses. These studies also educate the heart, and foster a feeling of kinship with humanity; therefore they claim the first place in the curriculum.

Striking periods are chosen from the world's history suited to the child's stage of development, and the other school studies—geography, arithmetic, science, drawing, etc.—are grouped around and associated with these historical periods. It cannot be too strongly urged that children must have systematic instruction in school; and if education means anything, it means a coherent arrangement of ideas in the child's mind, so that he may see the world as a harmonious whole rather than as a few groups of disconnected incidents.

CHAPTER II.

ESSENTIALS OF INSTRUCTION.

"Children should learn to know life in every respect, not from the copy, but from the original. Therefore, instead of putting books into their hands, they ought rather to be made acquainted, step by step, with things and human relations."—SCHOPENHAUER.

We have seen in the previous chapter that correlation means the grouping of school subjects round a central core; that a difference of opinion exists concerning the best core for this purpose; that Froebel is credited with choosing nature study; and the Herbartians decide in favour of humanistic studies, because they affirm that as these studies deal with human relations, they develop sympathy, and help directly in building up the child's character. Much of the best literature, too, it is urged, has been inspired by nature; and a sympathetic study of nature is a necessary preparation for a true appreciation of much of our best literature.

Froebel and Herbart agree on fundamental points; they differ in expression and application rather than in general principle. They both recognize that a balance must be struck between the nature and humanistic studies in arranging the school curriculum, and that a study of nature and a study of man are both necessary to the child's development. Herbart makes the humanistic group of studies the dominant note in the school course; but he writes of "two simultaneously advancing courses of instruction, the humanistic and the scientific," which meet in a moral revelation of the world—a revelation which shows, in the order of

nature and in the love of men, the Divine Power in the universe working for good. Froebel makes nature study the controlling force in his scheme of studies for young children, but he writes of educating the human being to be a "child of nature and of man." He says, "From every part of nature and of man there is a way to God." And again, "The observation of nature and the observation of man are mutually explanatory, and naturally lead to deeper knowledge the one of the other."

We have, then, the two great essential groups of studies—the humanistic and the scientific. Our problem is to group the school subjects proportionately under these headings, and to bring out the relationships which exist between them. Froebel denounced as strongly as the Herbartians all strained and formal relationships; he demanded that "each study should be related to the central subject directly and logically, as part of an essential process in its complete unfolding."

The little child stands before us waiting to be instructed. How is the teacher to choose the right material to present to him? A big beautiful world lies around us teeming with wonders, and behind us lie centuries of records of the actions, errors, and triumphs of human beings, and their noblest thoughts and liveliest fancies, bound up in our history and literature. It is an appalling task for the teacher to select, from this world of nature and of men, the mental nourishment upon which the child will best thrive.

Teachers of earlier generations, except in a few rare instances, troubled themselves little with these problems. There was the child, and there were text-books of history, geography, general knowledge, and arithmetic. So they set the child to learn by heart the *words* of the text-books, and when he could repeat many words parrot-like, the teachers flattered themselves that his education was progressing. And the text-books were marvellously ill adapted to the child's capacities and interests. Teachers who will take the trouble to wade through a collection of text-books for young

children during the eighteenth and a large portion of the nineteenth century, will often be moved to tears by the martyrdom to which the innocents of earlier generations were subjected.

These text-books erred in being arranged *logically*, and not psychologically. According to the logical method, it was assumed that all school subjects of instruction were perfectly organized bodies of knowledge, which were only to be approached "in one unalterable sequence of topics." In the logical arrangement of arithmetic, vulgar fractions precede decimals; and in natural history mammals are studied before birds or reptiles. Geography begins with an elaborate definition of itself, and then proceeds to define the earth, continents, river basins, and table-lands. "What is a watershed?" asked a boy of five of his sister aged six, who had triumphantly recited the definition she had learned out of her child's geography. "It isn't nothing but a word in the geography which you have to learn when you are as big as me," she replied grandly, with perfect good faith. This same small girl knew most of the rules in Murray's "Grammar" at the age of seven, in the same way that she knew her church catechism and collects—that is, she was able to recite the words, but they meant nothing to her, and she had no curiosity concerning their meaning. She was sometimes secretly amazed at the stupidity of grown-up people in thinking these uninteresting things worth learning, and she often wondered why school books were so dull, and story books so fascinatingly interesting; but she concluded in a vague way that dull and stupid things like school books were good for her, so she learned her definitions, and plumed herself on her virtue.

The mistake the good people made in writing these text-books was in considering school subjects organized bodies of knowledge. A child may study the tadpole and the frog before he knows how living things are classified, and he may know the story of King Alfred before he learns the names of all the Saxon kings. Grammar and arithmetic

require more logical arrangement, but even these lend themselves to psychological treatment.

The logical method of teaching is not recommended to teachers of little children. It violates the educational principle of proceeding from "the known to the unknown." "The logical order is naturally poor, being determined without reference to the apperceptive powers of children; hence it must yield to the psychological or apperceptive order." *

So we come back to our problem, How is the teacher who discards the logical method of dealing with school studies to choose the material for children? Is there any guiding principle to show her what to choose from the great world of nature and man for the mental nourishment of the young child? The Herbartians say the teacher must be guided by what the child already knows, in choosing the material for his instruction. What does the young child know? Imagine him coming to school for the first time, at the age of five, to be instructed. How is his education to begin?

It does not require much discernment to see that his education has begun long ago. It began when he was a helpless infant in his mother's arms. The child gains a vast amount of knowledge from his experience of the things in his environment. He also gains knowledge from his intercourse with human beings. His relations with his mother, and afterwards with his father, brothers, sisters, and playmates, bring out the emotional side of his nature. The child, then, has two original sources of knowledge—experience, which teaches him about the world he lives in; and intercourse, which teaches him his relations to his fellows. The child comes to school with a vast amount of knowledge, which he has gained at home, in the fields, in the streets, at play with his companions, and in his intercourse with his parents. This knowledge is a valuable and permanent possession. It is the business of the teacher to take the natural content of

* Charles de Garmo.

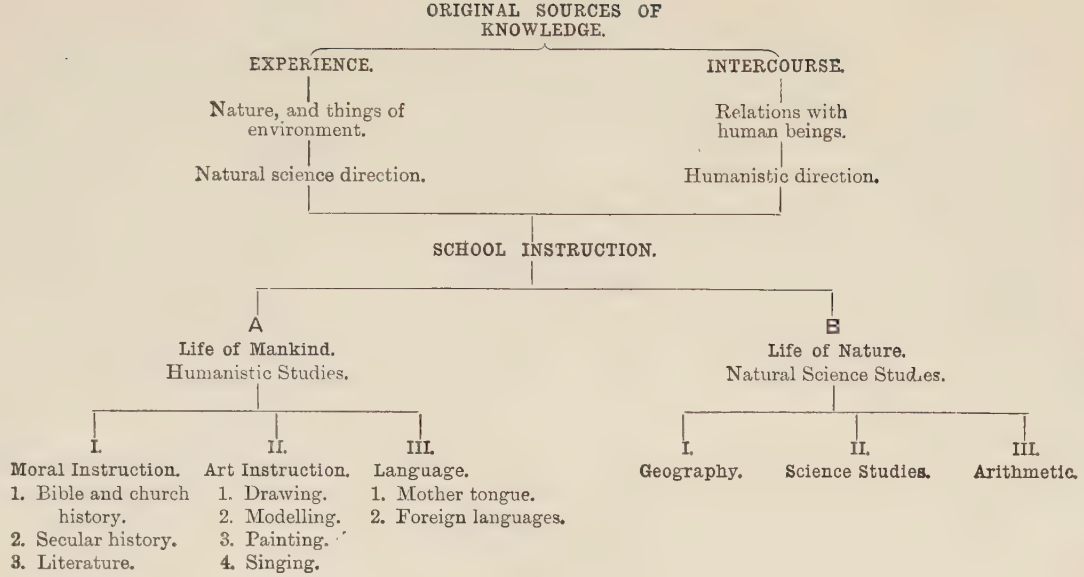
the child's mind as the basis of school instruction, and this natural content consists of the ideas, thoughts, and feelings about his home life and the things of his environment. The teacher must begin these familiar thoughts, ideas, and feelings, and correct, arrange, and extend them. New facts must be linked to familiar ideas already existing in the child's mind.

The method of the new education is psychological. It is in harmony with the child's desires. It also offers occupations and modes of expression which are welcome to children. Above all, the new education is rich in thought material. Reading and writing, as Froebel points out, are "mere matters of memory and mechanical dexterity." They do not belong to those "means of instruction that educate and develop the scholar as man." With young children there must be freedom of sensation, contact with actual things, and scope for self-activity. Let the child see, handle, and draw objects, but leave him alone to his own sensations and observations as much as possible. The teacher may provide for the sensations to pour in upon the child, by arranging his environment, but he must not obtrude himself and his dogmas between the child and his sensations. Give him material—pencils, brushes, bricks, objects, and pictures; let him make his own experiments upon them in his own way, so far as is consistent with class teaching.

Instruction, then, is to be guided in the early stages by the child's experience of the world and his intercourse with his fellows. This demands from the teacher definite instruction in natural objects, to extend the child's experience; and definite instruction in literature and history, to extend his intercourse with human beings.

Hence we get the starting part of instruction. The things of the child's environment will form the basis of the nature study, and his knowledge of human beings will form the starting-point for his humanistic studies.

The following table will make this clear:—


ORIGINAL SOURCES OF KNOWLEDGE.
EXPERIENCE.
INTERCOURSE.
Nature, and things of environment.
Relations with human beings.
Natural science direction.
Humanistic direction.
SCHOOL INSTRUCTION.
A
Life of Mankind.
Humanistic Studies.
B
Life of Nature.
Natural Science Studies.
I.
Moral Instruction.
1. Bible and church history.
2. Secular history.
3. Literature.
II.
Art Instruction.
1. Drawing.
2. Modelling.
3. Painting.
4. Singing.
III.
Language.
1. Mother tongue.
2. Foreign languages.
I.
Geography.
II.
Science Studies.
III.
Arithmetic.

In this work we are only concerned with the education of the little child. We teach him language, and extend his knowledge of human relations by fairy tales and poems, and we extend his knowledge of things by observations of the natural objects around him. These are the essentials of the little child's instruction. Other subjects arise out of these and group naturally around them.

CHAPTER III.

THE EDUCATIONAL VALUE OF FAIRY TALES.

"Keep a fairy or two for your children."—RUSKIN.

"Each stage of childhood is to be honourably treated for all it is worth."—LAURIE.

WHY do children love fairy tales? It is a favourite idea with many writers on education that a parallelism exists between the development of the child and that of the race. Rousseau, Pestalozzi, Froebel, Herbart, Spencer, and others agree in considering that the child, in advancing from infancy to maturity, passes through periods roughly corresponding to the stages through which man has passed in his progress from savagery to civilization. Hence the little child is in the same stage of culture as that of primitive man in the childhood of the world, and the interests, tastes, and desires of both are similar. This idea led Froebel to devise his gifts and occupations, and it has been the guiding principle of the Herbartians in selecting the materials of school instruction best suited to the child at the various stages of his development. Periods of culture for school instruction which were suited to the child's various stages have been worked out. The young child is in the mythical stage, and his interests are akin to those of the childlike barbarian of an early age.

Both child and barbarian find themselves placed in the midst of a big, wonderful, beautiful world in which they are profoundly interested. Life is a simple enough problem to

both at present. Experience has not yet controlled their fancy. They revel in wild and marvellous stories of giants, fairies, big animals, tremendous battles, and great heroes. They are utterly indifferent to abstractions of any kind. They can be appealed to by representations of those things of the wonderful world around them which they know and love. They can be moved by dramatic renderings of their own experiences and representations of their own elemental feelings. The child loves to mould plastic material into rude forms like those of the primitive potter, to weave, to plait, to fashion simple implements and household articles. He also loves to colour, and to represent all he sees in crude outlines, as the cave dweller scratched images on the bones of beasts of the chase.

In this period the child is to be nourished on folk-lore and fairy tales, and to be encouraged to express himself in making, painting, and drawing.

Later, the child passes into the heroic age, when reason begins to assert itself, and at this stage Herbart said practically with Carlyle, "Give the child a hero." Choose from classical literature stories "rich in incidents, relationships, and characters," * and nourish the child's ideals on these stories. "Present to the boy such men as he himself would like to be. Such you will certainly not find near at hand, for the boy's ideal of the man corresponds to nothing which has grown up under the influence of our present culture." †

Greek and Teutonic heroes at this period suit the child. They are psychically nearer to him because their ways, weapons, and modes of warfare are simple, and within the child's comprehension. Lamb's "Story of Ulysses" was probably the first attempt "to give literary form to the finest of the world's fairy tales for the benefit of the young," as Canon Ainger remarks. "It is certainly a pity that all children should not have the incidents, characters, and

* Herbart. † Ibid.

images that are part of the current coin of the world's intercourse when imagination is keenest and freshest."

In the present work we are concerned only with the little child, and there is almost universal agreement in the present day that the fairy tale is to be the basis of his instruction, for life is poorer for ever when fairy tales have not been read in childhood. We cannot all be classical scholars, but all can be steeped in childhood in European folk-lore and the culture of ancient heroic romance.

There are, and always have been, however, stern teachers who would deny the child his natural inheritance—the fairy tale. Rousseau would have none of it, and under his dispensation fairy tales were banned. The child was to learn only from real things within its experience; its emotional nature was to be left severely alone.

In an age of utilitarian education, Dr. Johnson had ventured to say a word in favour of fairies. "Children require," he said, "to have their imaginations raised by tales of giants, fairies, castles, and enchantments." This remark roused an indignant protest from Miss Edgeworth. "Even if children do prefer fairy tales," she asks, "is this a reason why their minds should be filled with fantastic visions instead of useful knowledge?" Miss Edgeworth, as an ardent Rousseauist, scrupulously refrains from appealing to the child's imagination at all. She claims to have avoided all poetical allusions in "The Parents' Assistant," and to have only described such situations as come well within a child's experience.

All the Puritans and educational writers of the Rousseau school, and in more recent times Spencer and Bain, agree with Miss Edgeworth that fairy tales have no educational value whatever. Spencer treats of literature and art in education as mere ornaments which can be well done without. He would defer the culture of these unconsidered trifles to some distant day of idle leisure in a future golden age, and in the meantime he would press upon the child those studies

necessary for the maintenance of his material existence, though even Spencer admits that fairy tales are a pleasing pastime for the nursery. Bain holds that æsthetic culture merely serves to indulge the emotions, and may be safely left out of education.

Plato does not disdain fiction in the education of children; he would teach the child by means of fables, which, he says, are "fictions, though there are in them some elements of truth." The boy in Athens was taught gymnastics and music—music including the repetition of poetry, chiefly that of Homer. In a word, games and stories were with Plato the starting-point of the child's education. It was this idea of beginning at the child's end with games and stories that Froebel developed in devising his kindergarten system.

Words and maxims are of little value in teaching children, for in spite of their strong, strange grip of the spiritual world, they cannot grasp abstractions unless they are translated into the fiction of fairy tales or the action of games, hence the symbolism of Froebel's early instruction.

"In his endeavours to capture and hold the imagination of the child, Froebel makes a decided advance on those who went before him. Rousseau has nothing to say of imagination, save that it is the source of all human misery, and that its wings should be clipped as early and as close as possible. Pestalozzi ignores it, hence the dreary monotony of his sense-impressing exercises. He urges us to make the child see, hear, and touch many things, and to introduce order into his observations, and to develop the elementary ideas of number and form, in order that he may be able to compare objects and exercise his judgment upon them, but the necessity of spiritual questioning of sense and outward things seems never to have occurred to him." *

Froebel repeatedly advocates the use of the fairy tale in the child's early education.

"Fairy tales and stories," he writes, "will very clearly

* Miss Blow.

reveal to the observer what is going on in the inmost mind of the child: whatever he feels in his heart, whatever lives in his soul, whatever he cannot express in his own words, he would fain have others express."

Herbart, as we have seen, gives the predominating place to fairy tales and legends in the child's early education. These are carefully selected from classic sources, and they are the starting-point of the literature and history which form the basis of the school instruction. They also form the pivot upon which the other school subjects turn. Herbart recognizes as clearly as Froebel the importance of fostering in the child a sympathetic love of nature, and he brings him into intimate relationship with the wonders of garden, field, and forest. Nor does he disdain formal studies such as reading, writing, and number; these are introduced in the child's first school year, but they are largely subordinated to living studies which cultivate sympathy and imagination, as fairy tales and nature lessons, which exercise observation and awaken awe and wonder.

In defending the use of fairy tales in the schoolroom, we would urge that they have an elevating effect on the child's mind; for, *firstly*, these stories exercise and cultivate the imagination, and imagination is a strong force in developing will-power. Imagination is very strong in the little child, and requires careful and wise training, because in it all higher aspirations are rooted, and the poetry of the old fairy tales appeals more than anything else to the child's imaginative tendencies. Properly directed, imagination brings out all the noble qualities of our nature, strengthens the character, and adds a charm to existence.

Secondly, these stories arouse in the child the sympathetic interest. He is constantly called upon to imagine the joys and woes of others, and to sympathize with them. He learns to enter into the feelings of the neglected Cinderella sitting among the ashes, to put himself in the place of the valiant

Jack going forth to kill the giants, and he thrills with rapture when the ugly beast becomes a handsome prince.

Thirdly, fairy tales give the child ideals, and the little one who has learned "to take the wishes out of its heart and project them on a screen of fancy" has gained in faith and aspiration. As Felix Adler points out, the ideals of childhood are childish and often material, as in the German story *Das Marienkind:* the little girl is taken up to heaven, and there she has sweetmeats to eat and cream to drink every day out of a golden cup, and golden dresses to wear. But the child gains much, for his ideals and wishes will spiritualize in time, and the idealizing tendency remains for ever.

Lastly, the ethical value of the fairy tale is important. As Colonel Parker says, "Fairy stories are to the child like the parables of the Master: they contain the seeds of truth, that will germinate and fructify in the child's mind far better than truth grown to its full stature and embodied in maxims and precepts." *

Unconsciously in these old tales the power of example is brought to bear upon the child. The true power of example does not lie in holding up particular actions to be slavishly copied. This is one reason why the goody-goody realistic stories so often fail in their purpose. Generations of good little Harrys and Lucys have given up their artless little ghosts, and ceased making their own beds, and prattling moral maxims for the instruction of less virtuous little boys and girls, and are forgotten; but "Red Riding Hood," "Snow White," and "Jack the Giant Killer" never die. They belong to an imperishable golden age. We cannot hope to imitate the doings of the immortal Jack, for the times and conditions have altered too much. But though the actions of these heroes and heroines cannot be repeated, they awaken into vigour the principle or feeling upon which the actions are based, and spur us on to worthy endeavour.

* "Talks on Teaching" (Parker).

Charles Dickens, who has moved so many of us to laughter and tears in our childhood, says, in speaking of the ethical value of the fairy tale on children: "Forbearance, courtesy, consideration of the poor and aged, kind treatment of animals, the love of nature, abhorrence of tyranny and brute force —many such good things have been nourished in the child's heart by this powerful aid. It has greatly helped to keep us ever young by preserving through our worldly ways one slender track, not overgrown with weeds, where we may walk with children, sharing their delights."

Fairy tales, too, prepare the child for poetry; they form the A B C of literature, as it were, and may be classed, as Froebel points out, among the higher forms of literature. So much for the positive value of fairy tales. It must also be borne in mind that any education that is mainly formal and intellectual is futile, and often harmful. The head may be educated at the expense of the heart, and narrowness of sympathies and hardness of disposition may result from a mind stored only with facts.

Charles Lamb, in a letter to Coleridge lamenting the instructive tendency of the age to cram children with facts from books, writes: "Knowledge must now come to the child *in the shape of knowledge* instead of that beautiful interest in wild tales which makes the child a man, while all the time he suspected himself to be no bigger than a child. Science has succeeded to poetry, no less in the little walks of children than with men. Think of what you would have been now if, instead of being fed with tales and old wives' fables in childhood, you had been crammed with geography and natural history."

Wordsworth too, in "The Prelude," protests against the prosaic education of his day; and he speaks with glad remembrance of "Jack the Giant Killer," "Robin Hood," and "St. George."

> "The child whose love is here at least doth reap
> One precious gain—that he forgets himself."—*Prelude, V.*

The charm of the "Arabian Nights" was early felt by him, and he shows how these stories appeal to feeling and imagination, and make the child strangely aware of unseen powers working within him.

Education must attempt to cultivate in the child right, vital, active feeling, otherwise it is defective. "If we wish children to *feel*," says Miss Blow in her suggestive and beautiful book, "we must give them something to feel about; and in order to educate the heart, we must educate the imagination."* Fairy tales and the old Bible stories furnish the best material for cultivating the imagination in young children, and of implanting the germs of that right growth of feeling without which knowledge is cold and barren.

The old fairy tales are full of the poetry of forest life, and they appeal to the child's sense of mystery, wonder, and awe, which leads on later to a comprehension of spiritual truths; as Colonel Parker says, "The proper function of fancy in intellectual life is spirituality." These old tales, too, are closely connected with nature; by their medium the child finds himself living in close communion with the entire universe. Plants, animals, trees, butterflies—nay, even the sun and the stars—are his comrades, and talk to him in his language and listen to his confidences.

The child has a strange sympathy with unseen nature, and here, too, the fairy tales do not fail him. They lead him into the depths of the sea, and show him the splendours of the mermaid's palace; they penetrate with him into the heart of the mountain, and delight him with gnomes, dwarfs, and trolls gathering the treasures of earth in their weird caves.

We nearly always find at the heart of the genuine old fairy tale a great universal truth, which forms the soul of the story, and in order to work out this truth the fancy must have free scope to create its own world—a fairy world, unlimited by time and space, natural laws or material ne-

* "Symbolic Education."

cessities. It is this universal truth which gives the fairy tale its grip on generation after generation. Fairy tales are histories of human nature, which does not change much in a thousand years or so. We are all persecuted princesses, handsome heroes, stupid ogres, or wicked dwarfs, if we were but able to penetrate through disguises; and it is because fairy tales are so true that they endure and go on satisfying the heart of childhood for centuries.

The classics which endure in the nursery are the traditional fairy tales which come to us from a time when the world was young as well as those stories which powerful pens threw off in happy moments of fancy. The child's keen insight readily detects the ring of true gold, and the works which hold his imagination are usually those which originated in a powerful brain. Hans Andersen, that curious Danish genius, with the soul of a woman and the heart of a child, wrote fairy tales which are loved in every nursery. Bunyan wrote "The Pilgrim's Progress," that great storehouse of stories which delighted the Puritan child, to whom fairy tales were banned. Defoe wrote "Robinson Crusoe." Swift wrote "Gulliver's Travels." Perrault, the philosopher and mathematician, wrote "Blue Beard." Southey wrote "The Three Bears," and Goldsmith is credited with having written "Goody Two Shoes." Thackeray wrote "The Rose and the Ring," and those of us who knew this in childhood grieve that only once did he pen stories for children. To come to our own times, we have the immortal "Alice," the creation of a learned mathematician.

Children, if left to themselves, appreciate what is great, and despise the feeble, watered-down stories of the type of "the good little May who went out with her mamma," which flood our so-called kindergarten literature. Strong and beautiful language has a great attraction for young children, and when the primitive charm of melody and cadence is added to the wild and beautiful story, a force is given to

it which stirs the young soul into an appreciation of the beautiful. In the development of the race the poets gave the first impulse towards the beautiful and true which tended to civilize the barbarian. The poet, as the legend of Orpheus shows, is the first teacher and civilizer of the human race. The child, then, must be nourished on classical literature even in the nursery, and those who seek unadulterated food for babes of tender years will find it in abundance.

Fairy tales fall naturally into two great groups—

1. *Nursery Tales*, or fairy tales proper These are the German *Märchen*, of which the word fairy tale is not an accurate rendering.

2. *Sagas*. These are stories of definite beings, supernatural or otherwise, held really to have existed.

The first are traditionary stories, in which the supernatural plays an essential part. Their only condition is that they end happily, and this satisfies that craving for poetical justice so strong in little children. National folk stories—"The Sleeping Beauty," "Snow White" and "Rose Red," "Beauty and the Beast" and "Cinderella"—are examples of this class.

There is a subtle flavour and beautiful simplicity about these old tales which children love. Thus, in the true folk story, the maid of honour fetches a pail of water, and the king minds the baby while the queen goes to church, as in Grimm's "Faithful John;" and in our familiar nursery rhymes the Queen of Hearts makes the tarts with a gold crown on her head, and the king sits in his counting-house with his bags of gold. The modern fairy tale, with its fantastic imaginings of complex minds, often outrages the ethics of the fairy world, and cannot be recommended for the schoolroom. The child's stage of culture demands the simple folk-lore of remote ages, as these come direct from the period to which the child belongs. These folk tales are the literature of simple people, to whom everything is a symbol; and every incident in the old round

of joy, pain, birth, love, and death has gathered meaning for centuries.

Modern fairy tales are to be excluded from the schoolroom; but an exception must be made in favour of Andersen. He has caught the spirit of the old-world tales, and his whimsical simplicity appeals to all children, and to all whose hearts refuse to grow old. Andersen never violates the ethics of the fairy world; in his "quaint and graceful imaginings the laws of poetical justice are always obeyed, as in all good fairy tales."* He, more than any other writer, understands the child's comradeship with the entire universe; and the mature reader risks losing his consciousness as a human being among the crowds of storks, slugs, apple-trees, cats, hens, swallows, peg-tops, gingerbread cakes, and green peas, all of which converse with an astonishing lucidity and amazing individuality of their own. They think the child's thoughts, and they talk his language; hence Andersen may claim kinship with those who created stories for the childlike barbarian, for the child has elected that he shall take place with these early poets, and in dealing with infant education we must often learn from the child.

The true folk stories, as is often pointed out, have a mythological background, dating from the dim past. The dauntless heroes who overcome all kinds of monsters, and the imprisoned princesses full of woes, find their prototype in the myths which deal with the battles of the Sun and the demons of Frost and Night, and the struggles of the fair spirit of Spring in the clutches of the dark monster Winter. What was originally superstition is converted into poetry in these old tales. Froebel, who constantly refers to the kinship of the child with his remote ancestors, says: "We shall revive in childhood the legendary period of human history, with its dross cleansed, its darkness illuminated, its aims and ideals purified."

* Mrs. Field.

England is rich in fairy lore. There are in our land Saxon fairies, Celtic fairies, and Scandinavian fairies. The oldest are the trolls and the elves and the pixies dear to the Danes and the Saxons. "Jack, commonly called the Giant Killer, and Thomas Thumb landed in England from the very same keels and warships which conveyed Hengist and Horsa and Ebba the Saxon," says Sir Walter Scott.

The folk-lore of England, moreover, has found its way into literature, and is thus rendered imperishable. "The Midsummer Night's Dream" is the crown and glory of the English fairy world. Shakespeare's great creation is a fairy kingdom with a king and queen and court jester; and the poets, from Herrick to Tennyson, have helped to preserve this fairy world dear to our forefathers. French fairy tales found their way into England when the Puritan influence began to decline, and we get Madame d'Aulnoy's fascinating collection, including the romantic and never-to-be-forgotten history of "The White Cat." Translations of Grimm's popular and fantastic tales met with a warm reception in England early in the nineteenth century, and Andersen's delightful fancies were first translated by the Howitts in the forties, and instantly became the rage.

Sagas relate to definite beings, supernatural or otherwise, believed once to have lived. The scenes of their action are usually in a specified locality. Dick Whittington, Lady Godiva, Robin Hood, and King Arthur are stories of this class. The sagas have a tendency to persist more than the nursery stories, for "by their attachment to places and persons a religious sanction is frequently given to them, and a local and natural pride is felt in preserving them."* A striking characteristic of both saga and fairy tale is that they are made up of incidents common to many nations, and some of them are known all over the world; for, as Andrew Lang says, "the human intellect is apt to reach

* "Science of Fairy Tales" (Harland).

to much the same conclusions all the world over, and to embody them in tales which have a striking resemblance to each other."

The saga treads earthly ways more than the fairy tale, and frequently mingles real historic facts with its romances; hence it forms a natural transition from the fairy tale to history. The Herbartians hold that the national sagas are a child's inheritance. They tell of the heroes of his land, they speak his language, they belong to his country. The child enters into their world in gazing upon the castle ruins gray with age, on the knights' armour, in listening to the popular legend, for "their heroes still live on in the hearts and mouths of the German people." So Ludwig and Siegfried are very real personages to the German child.

The fairy tales should be carefully selected. They should be simple, naïve, rich in incidents and relationships, not vulgar, foolish, or sentimental. Superfluities of language bore a child. He wants the story simply and directly, without moralizing or unnecessary circumlocution. Graphic word-painting will delight him, and appeal to his imagination, if it be skilfully done; and the harmony and beauty of the language will please his ear if it be true, simple, and strong, without striving after mere decorative effect. The true story-teller for young children needs to be something of an artist and something of a poet. Stories which may terrify children, and all stories which glorify cunning and trickery, should be modified or avoided.

The choice of the fairy tales may in some measure be determined by the locality in which the child lives. The folk-lore of the district, and its legends, offer at once natural material to the teacher. Professor Rein, who has worked out a series of lessons on fairy tales suitable for the children of the first school year (aged six and seven) in the Thuringian Forest, selects many of his stories from Grimm. These stories are happily chosen, for the district abounds in folk-lore and legends which have been handed down for

ages. The brothers Grimm gathered many of their stories directly from the lips of the Thuringian peasants, who had received them as oral traditions from remote ancestors.

Dornburg, a castle built on a hill overlooking the river Saale, and full of memories of the poet Goethe, is said to be built on the very spot where the palace of the Sleeping Beauty stood; and as one climbs through the bushes to the summit, one is thrilled still—in spite of one's advancing years—by the recollection that the prince cut his way through the briar roses on this very spot, in those dear, dim olden days which will never come again, except in the dreams of children and the visions of the poets. The story of "The Sleeping Beauty" is the epic of infancy, and Andersen's "Ugly Duckling," perhaps, may rank next, though its philosophy is for aspiring youth. Children never see the philosophy of their fairy tales, however. It is only when we begin to grow old that their true meaning dawns upon us, and then we marvel at our previous blindness.

The stories selected in this work are from Andersen, for children of six and seven love the whimsical fancies of this Danish story-teller. They have already passed through the bloodthirsty period when Jack the Giant Killer was their hero. They know all about "Red Riding Hood," "The Babes in the Wood," "Cinderella," "Jack and the Beanstalk," and other historic personages loved by the nursery world. Such stories are for the wide-eyed babes of four and the innocents of five, who revel in giants and bloodshed. The present selection of stories was worked out by a group of training students with children of six.

The experiment was very delightful, and that the children keenly enjoyed the stories and other lessons there was not a shadow of a doubt. "The Sleeping Beauty" might have been worked out instead of "The Ugly Duckling." The awakening of the princess, and the joy and happiness for ever after, might make a pretty parallel with the awakening of the earth after the long winter sleep, and the promise

of summer and autumn glories. This story was, however, worked out later as a summer study, and roses and other suitable natural objects were chosen to accompany it.

Teachers must choose their stories for themselves, for they know best what is true to themselves and suitable for the children. The folk-lore of the district and the children's interest are their best guides in this matter. No teacher can take stories and lessons worked out by another and follow them slavishly. Slavish imitation of the work of another mind is suicide in teaching as in other matters. It kills what is truest and best within ourselves.

Selections from Andersen's "Story of the Year," "The Snowdrop," "The Ugly Duckling," and "The Pea Blossom" are the stories worked out here. The first two may be taken in February and early March. We selected these because they appeared the best for our purpose. "The Frog Prince," by Grimm, might be added or substituted for one of the others with advantage.

In the treatment of the stories the method of the Herbartian schools in Germany has been followed. Some of the most profitable hours of my life have been spent in German classrooms watching skilled teachers instruct little ones in Grimm's fairy tales.

In the German schools the teaching of literature is treated with profound respect, and even in the lowest classes skilled teachers with distinct literary sympathies are put to teach the subject. It is a mistake to suppose that any one will do to teach the little children, while a certain amount of skill and ability is demanded from teachers of the upper classes. The teacher of literature should have a good deal of literary feeling as well as knowledge of the subject. One of the most difficult tasks of a young teacher of literature is to deal adequately with fairy tales. Literature teaching, to be fruitful, must be simple, sensuous, and impassioned.

Simplicity is usually the greatest stumbling-block to the young teacher. To be simple demands from the teacher

much labour, insight, and self-repression: labour, in order to obtain a thorough comprehension of the subject; insight, in order to recognize, and strength of character to be able to reject, the superfluities which may crowd and obscure the clearness of the idea. Only when we have learned how to select essentials and discard superfluities can our teaching be effective.

The literature teaching must be sensuous, because realities appeal to children and childlike races, while abstractions fail to touch them. Concrete instances stir their emotions when generalizations leave them cold. To children the human race means—

> "Such a child, or such a man,
> You saw one morning waiting in the cold." *

As Romney Leigh says in some disdain of the childlike character,—

> "A red-haired child
> Sick in a fever.....
> Will set you weeping; but a million sick—
> You could as soon weep for the rule of three
> Or compound fractions." †

Realities rather than abstractions appealed to the early poets in the same way. They sang of heroes, not heroism; noble deeds, not nobility; beautiful maidens, not beauty. All literature and history teaching in the early stages must appeal to the senses.

Again, literature teaching must be impassioned. Enthusiasm is to a large extent a matter of contagion, and the emotional teacher who feels the beauty of her theme can impart her appreciation and admiration to all her pupils, and kindle in them that intellectual glow which makes them aware of the human spirit working within them. Stolid and frigid teachers are fatal to literature and history teaching. Only sympathy can awaken the emotional life in the child. Above all, the scornful and superior

* "Aurora Leigh." † Ibid.

teacher should never be entrusted with the teaching of young children, and should never be allowed to tell a fairy tale. The teacher must tell the story to the children. The voice is more effective than the printed page. The story should speak for itself, and carry its own moral; to be continually hunting after a moral is distasteful to children, but they should be encouraged to compare the actions of the personages concerned, and formulate the moral. It is sometimes urged that the impression sinks deeper if it is not formulated; but this is untrue, for no idea becomes our own until we can express it in words. After the child has formulated the moral, the story ought to be read aloud to him in the words of the author, in order to accustom the children from the first to a good literary style.

The fairy tale and some well-selected poems will furnish sufficient material for all the literature and language teaching at this stage. The child learns language by using it, and in working out the stories he is constantly required to give oral reproductions of the various portions of the story. Words are chosen for word-building exercises; sentences are made by the children, printed on the blackboard, and used as reading and writing exercises. It is not even necessary to use a formal reading book. The fairy tale also offers innumerable suggestions for drawing, painting, and modelling common objects.

CHAPTER IV.

NATURE STUDY IN RELATION TO FAIRY TALES.

"Come forth into the light of things,
Let nature be your teacher."—WORDSWORTH.

THE fairy tales, as we have seen, form the central point in the school instruction, and the nature teaching is therefore, to some extent, incidental to the literature, which forms the guiding thread, as it were, throughout the entire primary school course.

That the topics in the nature teaching are suggested by the fairy tales by no means subordinates the nature study in the general scheme of instruction. These old tales are simple, they deal with homely and familiar matters, and suitable nature studies may be easily chosen which are interesting for their own sake, as well as from their connection with the story. Andersen's story of "The Pea Blossom" is a fitting prelude to a systematic study of the pea plant, just as exercises in painting the pea blossom and modelling the pea pod are suitable forms of expression after the child has studied these in detail. All grotesque, remote, and complicated objects are naturally to be avoided, and simple familiar objects chosen which are near to the child's sight, and therefore interesting to him.

The child is interested in the world which lies about him, and we begin his nature teaching by requiring him to study the objects in his world which appeal most strongly to him. The normal child will soon make known by his desires and

his actions what things do appeal to him; and the true teacher is a person who learns from the child, and will, therefore, be guided by him all along the line.

We learn from the child the only two things worth knowing in preparing a scheme of nature lessons for him, and these are, firstly, the kinds of things he sees, and, secondly, what he knows about them and what he wants to know.

The child's keen, wandering eye takes in many quick observations. He sees the pretty flower in his pathway, he watches the bee creep inside it, and he wants to know what the bee finds there. He sees the spider swinging on its slender thread from the branches of the sweetbrier, he watches the completion of the web, and he wants to know where the material comes from to make it, and what use it is. The curious snail shell, the brilliant butterfly, the smooth pebble, the wriggling earthworm, the shining horse-chestnut, and the pink sea-anemone are all matters of intense interest to him. He comes to school with a thousand pictures in his mind of the beauty and wonder of the earth; and the dull teacher with no conception of these pictures, and the wicked teacher who ignores them, persistently force upon him dreary details which have no roots in his experience. Thus do they help to banish from the child's mind for ever the beauty and wonder of the universe, and rob him of that touch of poetic insight which is so easily killed in childhood. As Miss Blow says, "Teachers sin dangerously against child nature when they refuse to aid his spontaneous struggle to do and learn, and be that which his stage of development demands." *

What facts does the child think worth imparting to his sympathetic auditor concerning his observations? The colour of the bird, flower, or insect, the size, the likeness or unlikeness to similar or dissimilar things, the note of the bird, the hum of the insect, the behaviour of the earthworm, and the scent of the flower, are the things he will tell you. The wise teacher learns from the child, and begins by noting these

* "Symbolic Education."

things, by seizing on the points interesting to him and making use of them. Breadth rather than depth characterizes the child's first observations on the universe. He wants striking facts rather than tiresome details, and he wants them at the psychological moment. The story of the "Frog Prince" will send him to establish relations with the frogs in the ditch. To tear him away from this wholesome and fascinating pursuit, and to make him sit in a classroom and drone in chorus with his fellows dreary facts about "cotton" or "camels" because they happen to come in the scheme of lessons, is to kill his interest in nature, blunt his imagination, and help to make him into a dull materialist.

The sympathetic teacher will arrange a visit to the ditch, and direct the observations on frogs, or, if that be impracticable, will introduce a frog into the classroom, and pass it round in a glass with a muslin cover, and after this inspection the lessons on frog spawn and tadpoles will be received with avidity.

It matters nothing, in devising the nature teaching, whether the teacher begins with the mushroom or the Canterbury bell, with the ant or the owl; but that the child wants to study that particular thing, and that it opens up the great kingdom of life to him, matters profoundly. The teacher's attitude, too, towards the owl or the Canterbury bell also matters prodigiously. The teacher who loves the owl and admires the Canterbury bell imparts that love and admiration to the children, and what we especially wish to foster in nature teaching is love for everything that is alive. Training the emotional nature of the child is one of the most important parts of education, and this may be largely effected by caring for plants and animals.

The name "object lesson" has been avoided in this manual on account of the vagueness of the term, and the various ways it has been interpreted. Students of Pestalozzi will know how his method of teaching language, form, and number has been misrepresented at various times in the

name of object teaching. Floods of information on all topics, from a chair to a coal-mine, and from the making of soap to the making of the Crystal Palace, have been imparted to long-suffering children for a generation or so, under this elastic phrase. It has been the excuse, too, for victimizing tender infants with streams of vapid and puerile conversation to teach obvious facts and convey utterly superfluous information; and it has been wisely used by intelligent teachers as a means of training the senses.

Those who wish for definitions and arguments on the use and misuse of object lessons can read for themselves in the pages of Spencer and Bain. I shall merely offer one or two criticisms on schemes of so-called object lessons which, even in the twentieth century, are to be found in some infant schools. In a scheme still used in an infant school, subjects such as coal, soap, needles, insects, a candle, trees, and clothing followed each other in bewildering succession; and animals such as the giraffe, the kangaroo, and the rattlesnake were introduced, for no reason except that, the teacher said, the children were tired of "lions and tigers, and wanted a change."

The first criticism to be offered on such a scheme is that there is a lack of sequence and connection. The subjects are apparently chosen haphazard, without any regard either to the child's wishes or his powers of acquisition, or their relation to anything else in the time-table.

Secondly, many of the subjects are too remote. Direct sense perceptions at this stage are essential, and the rattlesnake and kangaroo are too far removed from an English child's experience to help him to understand these creatures.

Thirdly, general subjects such as insects, trees, and clothing should be avoided. Lessons on a single definite tree such as the oak or the horse-chestnut, or lessons on a single insect such as the spider or the grasshopper, may be given, the likenesses and differences afterwards compared and contrasted, and a simple general statement formulated at the

end—as, for example, "Trees have roots, trunks, branches, leaves, and fruit; the leaves are usually green, and they usually fall off in winter."

In spite of all that is written and said concerning the importance of proceeding from the particular to the general in dealing with young children, teachers still go on perpetuating errors and bewildering little ones with obscure lessons, such as "insects in general."

Again, in considering the kinds of object lessons to be given to little children, it must be remembered that the aim of these lessons is not to impart miscellaneous information, but to train the child to see things accurately, and to express what he sees; therefore lessons such as the manufacture of soap and the tanning of leather are, as a rule, to be avoided at this stage. These subjects are not in themselves calculated to awaken interest, sympathy, imagination, or admiration; nor can they train the child's observation, inasmuch as the processes employed are beyond his powers of comprehension. They merely burden his mind with useless lumber, which is actively harmful in that it crowds out more vital material.

The true aim of the so-called object teaching is to train the child's observing powers, and to awaken love, sympathy, and admiration in his heart; and simple natural objects are the best material for this purpose. The child instinctively turns to the animal and plant world to wonder and admire, and the teacher's safest guide to follow is the child.

The little child stands in the midst of a bewildering and beautiful world, and the teacher may, by means of the nature studies, help to put him in harmony with his surroundings.

The Herbartians manage their nature teaching wisely. They take their pupils into the woods and meadows, and on to the mountains. Together they watch the planting of the seeds in spring, and the gathering in of the harvest in autumn. They watch the frogs' eggs in the ponds in March, and the

bursting of the buds in April, and they seek for the first lily of the valley and the first butterfly in May. They travel together to see a sheep-shearing, and they go from the valley to the mountain, from the fertile meadow to the boggy marshland, to collect and compare the kinds of vegetation. I have gone as far as fifteen miles, with classes of small boys of six and seven, to observe simple natural objects unknown in the child's immediate neighbourhood.

The children are told very little in these nature lessons, but they are made to observe much. They are trained, as Comenius says, "to cast about their eyes, ears, and nostrils," and to study "the living book of the world instead of dead papers." The observations thus gained out of doors are arranged, corrected, and amplified afterwards in the classroom. To shut children up in classrooms and *tell* them about things is a poor way of helping them to realize their surroundings; to take them out of doors and *show* them things is a better method.

The town schools offer some difficulty to this free rambling with nature, and some teachers are beginning to discard nature altogether from the town schools, and they offer, instead of studies from the fields and ponds, object lessons on the tanning of leather, the spinning of cotton, and the like. The very fact that city children are shut off from living nature makes it so much the more essential that nature studies should be brought to them.

The child who has not watched seeds grow and tadpoles develop, who has not heard the lark sing and the lambs bleat, who has not gathered violets and hunted for blackberries, has been cheated out of his inheritance of the richness and fullness of earth. Excursions into the country the child must have.

But even in towns materials can be found for object lessons of a more stimulating nature than "the making of soap." There are sparrows and pigeons in towns, and even occasionally swallows; and there are ducks and swans in

the park, and some trees. There are weeds to be found in cracks of the pavement, and most town children can find a few stray daisies, feeble and smutty perhaps, but still the same daisies which children and poets have loved since the beginning of time. In towns, too, spring flowers can be bought in the streets for a penny a bunch, and no school need be without daffodils, primroses, and violets at the proper season.

Every school may have its little aquarium, where children may watch the behaviour of the tadpoles, the water-spiders, and the snails, which the careful teacher will provide. Every school, too, can have its experiments in germination; and acorns, beans, wheat, and snowdrops may be grown to illustrate the yearly miracle of the earth's awakening. Experiences are to be found everywhere to those who look for them with a "seeing eye and active mind."

As regards object lessons in towns, Mr. Horsfall, in his article "Art in Everyday Life," writes: "I have heard very able Americans gravely urge that as the majority of the inhabitants of civilized countries now live in towns, no effort should in future be made to interest them in flowers, trees, birds, and all the other remote country things, of which their home life leaves them ignorant; but we should seek to develop their hearts and minds by revealing to them more fully the manifold charm and interest of things they already find interesting—the shops, the mills, the tramcar system, the fire-brigade, the railway and telegraph systems. I do not know whether he would include among the subjects appropriate for the study of children under the guidance of teachers those institutions which all town children are somewhat interested in, and can easily be helped to take a very keen interest in—the butcher's shop, the slaughter-yard, the public-house, the music-hall." *

The special value of nature teaching, it seems to me, lies

* *Journal of Education*, June–July, 1900.

in the scope it affords for exercising the early discriminating powers, such as observations of colour, form, number, surface, and texture. Observation is the child's attitude towards natural objects, and nature ever satisfies the curiosity, and ever arouses fresh activity for wonder and thought.

Nature teaching, also, is in close accord with the child's natural instincts and desires; and, lastly, a study of nature affords the child scope for expression in language, in drawing, painting, and modelling.

It must be distinctly understood that the nature studies in this work are merely suggestive. Each teacher must make her own selection, and work out the subjects best suited to her children and herself. She must select, amplify, and adapt until she gets what she wants; for no teacher with an atom of individuality can slavishly imitate the work of another.

For example, "The Ugly Duckling" might be drawn upon to a much greater extent than in this series, and lessons on the duck, the hen, the swan, and studies of a farmyard very appropriately added. Lessons on milk, a churn, butter-making, and cheese have very naturally followed from the story of the Ugly Duckling in a previous scheme of lessons.

The subjects chosen in this book have natural connections with the fairy tale. They are also connected with one another, and they follow one another in a logical manner, the one suggesting and leading on to the next. It must not be supposed that the nature studies are to be chosen without system because they are suggested by the fairy tale. Unless nature is studied in some definite order, unless the study results in comparison and some natural classification by the child, and finally, in a broader and better comprehension of the unity of nature, it is of little avail in helping to form the child's mind. The whole series leads to a comparison between the beginnings of plant and animal life.

The following are the nature studies worked out:—

I. Animal Life.
- Eggs and chickens.
- Frogs' eggs.
- Tadpoles.

II. Plant Life.
- The snowdrop.
- The daffodil.
- The primrose.
- The cowslip.
- The violet.
- The lily of the valley.
- Germination of bean.
- Germination of wheat.

"The Ugly Duckling" suggests eggs and chickens; the teacher may continue with the hen and duck and swan if she has time, and compare the hen with the duck, and afterwards the duck with the swan. The comparisons and generalizations, if skilfully managed, are often the most fruitful part of the lessons.

"The Snowdrop" and "The Pea Blossom" suggest the germination studies, and the idea that the earth is awakening.

"The Story of the Year" suggests the series on the spring flowers. As these flowers are typical of spring, and very common and beautiful, it is well to cause every child in town and country to study them. They fall naturally into the two great classes of plant life, and afford concrete examples of early studies in these. A series of lessons on spring birds —cuckoo, swallow, sparrow, lark, etc.—may be given instead of the flowers, or in addition to them.

It was intended to introduce Grimm's "Frog Prince," and this suggested the frog, which is a happy study, inasmuch as frogs' eggs afford an interesting comparison with hens' eggs. The story of the "Frog Prince" has not been worked out here, as the series consists exclusively of Andersen's stories. The teacher may, however, use the poem "Twenty Froggies" to introduce the subject.

As the idea of the awakening of the earth extends into the animal as well as the plant world, it was necessary to

have more than one example of the beginning of animal life. The life of the tadpole seems a very natural example at this stage.

Number lessons require a certain amount of logical treatment, but all kinds of suggestive problems may be worked out in connection with the nature studies, which will be interesting to the children on account of their connection.

The blackboard illustrations are to be drawn during the lesson before the children. They are a most valuable aid to nature teaching. These illustrations are the children's microscope. They afford the teacher opportunities of enlarging minute parts, of showing the veining of leaves, and of making clear the early stages in germination. They are to be sketched rapidly in coloured chalks. Nothing can supply the place of these pictures which are created before the children; they serve to intensify, guide, and correct the child's own observations, and they deepen his artistic interest. The value of the blackboard sketch does not depend on the detail and finish; it depends on how far it clears up the child's difficulties and helps him to comprehend. Children should be encouraged to make sketches on the blackboard themselves. They watch the details of the picture grow under the teacher's hands, and that awakens in them a desire to make similar pictures of their own.

CHAPTER V.

HOW TO PREPARE AND PRESENT THE LESSONS.

"In teaching, repeat and repeat, revise and re-revise, and be always falling back on elementary facts relative to the subject, so as to maintain a series of associations."—LAURIE.

THE so-called object lessons of the old type which young children are called upon to endure at the hands of young teachers are, as we have seen, often mere masses of information gleaned from the pages of encyclopædias, and arranged according to a stereotyped plan which is thought to be logical. A sheet of paper ruled into three columns, and inscribed with the time-honoured words HEADS, MATTER, METHOD, and an encyclopædia, seem to furnish the young teacher with materials for preparing any lesson under the sun.

"It is not at all essential that school children should know much of anything, but it is essential that they know thoroughly, according to a sound method, what they profess to know."* Yet teachers go on striving to teach much, and despise sound methods.

We all know the bald, bookish lessons which young teachers produce after a study of the encyclopædia, rather than a study of what the child already knows. They undervalue the use of experience, and they love to get facts out of books, which they slavishly repeat to their class. They are too timid to see things with their own eyes, and to describe what they see. I once asked three very young students to

* Professor Laurie.

prepare a simple lesson on the daisy. Two of them failed to do it, and told me at the end of a week that there was nothing about daisies in the object-lesson books they had consulted; and the third had prepared a lesson on the nutmeg instead, because, as she expressed it, she had "found the *matter* in a book."

I remember the lesson still, with its uninteresting detail, technical terms, absence of associating links with other lessons, feeble questions, poor attempts at comparison, and amazing mass of words. There was plenty of information in this lesson, of a sort; but the child wants at this stage *simple*, *clear*, *firm* perceptions of objects rather than masses of information about them.

The objects must be presented to the child; he must examine and handle them, in order to learn for himself "the qualities they put forth." And after forming his own ideas about them, he must learn to express these ideas in his own language. Distinct names should be given to the object and its parts—a local, homely name if possible. All difficult technical terms should be avoided. A descriptive name is best: for instance, calyx may be described as a *flower cup* or *coat*, and the form of the daffodil leaves may be called *sword-shaped*.

Herbart lays down very definite instructions for helping the teacher to gain the "primitive attention" of young children. He insists on the need of "direct sense perception of things." Failing the object itself, a good picture is to be preferred to a verbal description, as it gives a stronger impression. The teacher who can sketch rapidly and well on the blackboard is never helpless before a class. She can express her thoughts to the children even if she has no pictures, models, or specimens. Elaborate finished sketches are not so effective as a rapid sketch drawn before the class.

Herbart next demands "clearness in single perceptions." Each point must be presented separately and clearly, and carefully studied. A hasty piling up of one fact upon

another is to be avoided. Every point in the lesson must lead on to the next in an orderly manner. There must be frequent resting-places in the lesson, so that the child may take in the facts presented to him, and apprehend them in their proper connection. Frequent pauses are made in the lessons which follow, for the children to think over what they have learned, and to express it in their own language.

Herbart further insists that everything must be connected. One part of a subject must be related to another, and the relations which exist between different subjects must be brought out. The child's attention is disturbed by the intrusion of foreign matter. Old material which the children have already learnt must be constantly called up and associated with new material. Old ideas must be frequently used to help the child to comprehend the new. Herbart insists on the frequent application of knowledge which the child possesses; but he would have teachers avoid mere repetition of familiar words. He prefers that the child's mind should be exercised by constant application. Oral reproductions, drawing, writing, bodily movements, are all exercises which help to impress the memory, and may be used in the application of knowledge. Herbart also insists that the instruction is to be built up on the foundations of experience which the child has gained in and out of school; hence the home and school life should be in continual reciprocity.

Childhood is the time to gather data, and to get to know single things clearly and thoroughly by means of the senses. "To exercise the senses carefully in discriminating the differences of natural objects is to lay the foundation of all wisdom, all eloquence, and all prudent action," said Comenius. Facts, words, definitions, and rules simply stored in the memory are of little use to the child. Facts, before they can be said to form a part of the mental furniture of the owner, must pass through various processes. They must be sifted, sorted, classified, and connected. These processes require more labour, time, and thought than mere acquisi

tion; but only when the facts are worked over in this way is knowledge really assimilated.

The true method of imparting knowledge is to proceed from "particulars to the general, and back again to particulars." The child is set to study individual cases, to compare them, to group them, and finally to arrive at a general conclusion or law concerning them. This law he is required to apply to other cases. For instance, the child, after a series of studies on hens' eggs, frogs' eggs, chickens, and tadpoles, arrives at the following general conclusion: "Tadpoles and chickens come from eggs, and they are hatched by warmth." This statement can be further emphasized in studying the life of the swan, the duck, the butterfly, the ant, and other living creatures. Again, after studying the snowdrop, the daffodil, and the lily of the valley, and comparing and contrasting them with the violet, the primrose, and the cowslip, and after observing the germination of the wheat and the bean in various stages, the children are led to make the following generalization: "Some plants are like the wheat, in having long, narrow, straight-veined leaves, and flowers whose parts are grouped in threes. Some are like the bean, in having leaves with midribs, branched veins, and flowers whose parts are grouped in fives."

In further study of plant life, the children apply this law to other cases, and learn to group into the two great divisions.

This is surely a more rational method than beginning the study of plant life with the statement, "There are two great classes of plants—the monocotyledons and the dicotyledons," as teachers of even quite young children are frequently guilty of doing. It is also more satisfactory than giving occasional lessons on such subjects as trees, the cotton-plant, insects, the nutmeg, the india-rubber tree, etc., which are so common in many of our infant schools and lower classes.

The Herbartians expand this principle of "from particulars to the general" into the theory of the "five formal

steps." They begin by presenting single particular concrete cases; they compare with other cases; they arrive at a general truth, formulate it, and finally apply it.

The material for school instruction is carefully chosen for the school year. This material forms an "organic whole," of which every part helps to complete and illustrate other parts. This material is divided for convenience into groups sufficient for a school term. This manual contains material for the spring term—from February to the beginning of May. Each of the school subjects is further mapped out into convenient sections called "method wholes," and each method whole contains a clear general truth. It is the aim of the teacher to lead the children to arrive at these general truths for themselves.

The five stages in each method whole follow the classification of Professor Rein, and are adopted in many of the Herbartian schools in Germany. The five steps are:—

1. Preparation.
2. Presentation.
3. Association.
4. Formulation.
5. Application.

1. Aim and Preparation.—The first step, preparation, includes the statement of the aim, by means of which the child learns clearly what he is going to do. There is no need to make a mystery of the subject of the lesson. "What does your mother sometimes put in rice puddings?" asked a young teacher of her class. "Eggs," "Milk," "Sugar," "Water," "Currants," were answers that the children very naturally gave. "Yes, yes," she replied in irritation; "but I don't want those answers." She wished the children to say "Nutmeg;" but as none of them guessed the right answer, she said they were dull, and her temper suffered at the outset as she began to pour upon the children streams of uninteresting detail about nutmegs. In the lesson on the life of a bean

plant, the teacher began by making a simple statement: "We shall see how the bean is like a frog's egg." This was said slowly and impressively; it aroused the child's expectation at once in the subject, and helped to drive out of his mind alien ideas, and call up all ideas he had on beans and frogs' eggs.

"What are we going to do?" asked the teacher presently; and individual children were required to state the aim of the lesson.

The statement of the aim must be simple: it should contain no indefinite or unknown words, it should have a concrete content, and it should never be merely formal.

The aim leads on immediately to the preparation. "What can you tell me about beans?" was the next question. Children whose spontaneity and curiosity have not been checked in school will contribute various ideas on the matter. "They have red flowers." "They grow in shells like peas, only bigger." "We eat them with bacon." "They are for feeding horses." All these remarks, and others, were made in an actual lesson on the bean plant. The teacher waited until the ideas of the class were exhausted. Then she discussed the children's statements, arranged the various ideas, rejecting what was false; then she summed up the whole. For instance, from the above remarks she may require a connected account, something like this: "Beans are of various kinds; some bean plants have red flowers. Beans grow in shells like peas. Some kinds of beans are used for our food, and some for feeding horses."

In the early stages of instruction children have few ideas, and these are chiefly derived from original sources; hence the preparation is often meagre but vivid. In later school years, when the child has had wider experience and knowledge, he is frequently able to contribute many interesting details to this stage of the lesson. The preparation paves the way for the acquisition of new material, by calling up the old ideas connected with the subject which already exist in the child's mind.

"To instruct," says Professor Laurie, "we must always build the new upon the old, on what is known." And again, "Link the teaching of the new with facts already known with which the new has a real relation of likeness or unlikeness, so that the growth of knowledge may be an organic growth."

The first step, then, *preparation*, calls into consciousness ideas related to the subject in hand. It consists in going over the pupil's stock of knowledge and setting it in order, so to speak, so that the reception of the new matter may take place easily and naturally. Preparation is chiefly analytical; the following stage, *presentation*, is synthetical.

2. **Presentation.**—This step consists in laying the new matter before the pupil. In a lesson on the bean we put the object before him, and direct him how to examine it. The observations in Step II. of the bean study required three lessons. The following observations were made:—

(*a*) Examination of ordinary dried broad beans.

(*b*) Examination of beans that have been soaked for twenty-four hours in water.

(*c*) Examination of beans that have been planted for three days.

(*d*) Examination of beans that have been planted for a fortnight.

At the end of each examination the children's observations were collected and expressed in correct language. Orderly repetition and good expression are necessary items in the child's development. At the conclusion of the third lesson—for a presentation may often be continued into several lessons—a connected reproduction of the whole was required from the children before proceeding to the next step.

"One thing at a time" is the ruling principle of this part of the lesson. A single point is presented to the child, his entire energy concentrated upon it until it is slowly and thoroughly mastered; a sufficient time is allowed for reflection upon it, and then his observations are summed up and

stated in exact words before proceeding to the next point. Not quantity but thoroughness is demanded.

Intelligent thought requires time; therefore it is a great mistake to encourage a quick succession of rapid answers from the pupils, and to praise their readiness in the answers. This leads to mechanical memory and lack of thought; and this over-cultivation of verbal memory, at the expense of intelligent thought and accurate observation, is one of the greatest evils of our schools.

3. **Association.**—At the end of the presentation the child may be said to have obtained a complete mastery of single things. This clear comprehension of single things and externals is a very necessary part of teaching; but the teacher's task is only half completed when the child is put in possession of the new knowledge. The illiterate mind is content with single details; it does not rise to general ideas and relationships. The child must be put on the way to find the laws and causes which govern groups of details, and the third step, *association*, is of importance in helping him to do this. A parallel is set up between new matter and the old, by means of which the child is finally brought to the general truth contained in the concrete material. The object of comparison must not be chosen haphazard without plan; it must be well known to the child in all its details. In this case we draw a parallel between the present study (the life of the bean plant) and a past study (the life of the tadpole). The association in this instance required a whole lésson.

The following points were brought out for comparison:—The bean contains the baby plant and its food; the frog's egg contains the baby tadpole and its food. The bean is protected by tough skin; the egg is protected by jelly. The bean requires warmth and moisture to make the baby plant grow; the egg requires warmth to hatch it. The bean grows slowly, and sends forth two tiny leaves and root; the tadpole grows slowly. The bean becomes a bean plant, and

the egg becomes a baby frog. This step leads on naturally to the formulation of the general law or fact, which is expressed in exact language.

4. **Generalization.**—In this case the children readily learnt the formulation: "The bean seed and frog's egg are alike in containing a baby plant and a baby tadpole, and food to feed them. They both require warmth, and they both grow slowly." The essential general idea gained from this series of lessons is that in the origin and development of animal and plant life there are many points in common. This general idea is capable of application throughout the whole of the future nature studies of the child.

Herbart especially warns teachers that they cannot always, with young children, lead on to generalizations. Children's experiences are not sufficiently numerous in every instance to form the basis of generalization. Therefore we must frequently be content, in the child's early school years, with complete summaries instead of hasty generalizations.

5. **Application.**—In this stage we require the pupil to apply the knowledge already learnt, and seek to deepen the impression made by requiring him to express his ideas either in language, brush-work, drawing, modelling, learning by heart, writing verbal descriptions, experiment, working out problems, or singing. A good deal of the manual work will come under the head of Application.

The formal studies—reading, writing, and arithmetic—may be made largely incidental to the *thought* studies which are worked out in Parts II. and III.

Suggestions are made under the head of Application to show how exercises in the formal part of school instruction may creep in unaware, just when the child's interest is fully aroused.

Definite lessons must, of course, be given in reading, writing, and arithmetic; but these, being more or less mechanical, should not occupy the larger part of the school time. Make the school studies full, rich, and interesting, and the children will master the dry details without weariness.

PART II.

FAIRY TALES AND POEMS WORKED OUT.

(Practical.)

ANALYSIS OF "THE STORY OF THE YEAR."

(*Selections.*)—HANS ANDERSEN.

METHOD WHOLE I.—Central Idea: Contentment.

METHOD WHOLE II.—Central Idea: Joy and Beauty of Spring.

METHOD WHOLE I.

STEP I. PREPARATION.—Analysis of Children's Ideas.

STEP II. PRESENTATION.—(*a*) The City in a Snowstorm.
(*b*) The Grumbling Sparrows.
(*c*) The Contented Sparrow.

STEP III. ASSOCIATION.—Comparison between the Grumbling and Contented Sparrows.

STEP IV. FORMULATION.—"I have learned, in whatsoever state I am, therein to be content."

STEP V. APPLICATION.—Learning little Poems; Word-building; Writing; Picture Arithmetic, etc.

METHOD WHOLE II.

STEP I. PREPARATION.—Analysis of Children's Ideas.

STEP II. PRESENTATION.—(*a*) Town Sparrows in the Country.
(*b*) Winter Prepares to Depart.
(*c*) The Coming of Spring.
(*d*) The Work of Spring.

STEP III. ASSOCIATION.—Contrast the Gloom of Winter with the Gladness of Spring.

STEP IV. FORMULATION.—"Lo, the winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come."

STEP V. APPLICATION.—Learning by heart Selections from the Poets; Picture Arithmetic; Making an Almanac; Geography, Drawing, etc.

METHOD WHOLE I.

STEP I.—PREPARATION.

Special Aim.—You are going to hear about grumbling and contented sparrows.

What season of the year is it now? What month is it? What kind of weather do we have in March? In April? When does spring begin? How many months are there in spring? What season comes before spring? What season comes after? What flowers bloom in spring? What birds come in springtime? (Cuckoo and swallow.) What birds stay with us all the year round? (Sparrows.)

RECAPITULATION.—Spring begins in February and lasts until the end of April. It comes after winter and before summer. We often have snow in early spring. In spring the snowdrops, primroses, and violets bloom, and the swallows and cuckoos come.

STEP II.—PRESENTATION.

(*a*) **The City in a Snowstorm.**—(The teacher tells the first section of the story in her own words.) Very early in spring there came a terrible fall of snow, and the city was covered with a white mantle. The roofs and the streets were heaped up with snow, and the coaches and horses looked as if they had been frosted with sugar. The people ran quickly to get indoors, and the footmen stood in the shelter of the carriages

with their backs to the wind. At last the snowstorm ceased, and then a narrow path was swept clean in front of the houses, where the people could walk. It was so narrow that only one person could walk on it at a time; and when two people met, one had to step aside in the deep snow. At night the stars shone down on the white city, and the firm frozen snow crackled under foot.

Early in the morning the sparrows hopped out to look for food; but there was very little to be had, and they were terribly cold. [Blackboard sketch of sparrows in a snowstorm.]

Questions.—Who has seen snow? What is it like? Why did the horses and coaches look as if they had been frosted with sugar? Why did the people run indoors? Why did the footmen stand with their backs to the wind? Why was a narrow path swept in front of the houses? What happened when two people met? What was the city like at night? Why did the sparrows come out early in the morning? What other bird comes to our windows looking for food when the snow is on the ground? (The robin.)

Recapitulation.—Require individual children to tell the story so far in narrative form. Encourage children to correct each other's style.

(*b*) **The Grumbling Sparrows.**—"Tweet, tweet," said one sparrow; "they call this a *new* year. I think it is worse than the last. The old year was just as good. I'm quite unhappy."

"Yes," grumbled another. "And the people ran about for joy, and fired off guns to welcome the new year. I was glad too, for I thought we should have some warm days; but it only freezes harder than

ever. I think that these silly people have made a mistake in reckoning the time."

"To be sure they have," said an old sparrow. "They have an invention of their own called an almanac, and they arrange the year according to it; but it is a stupid plan. The year begins when spring comes; that is the proper way to reckon time."

"When will spring come?" asked a little sparrow.

"It will come when the swallow* returns," said the old sparrow; "but he is uncertain, and here in town nobody knows anything about it, but in the country they are wiser. Shall we fly there, to be nearer spring?"

Questions.—When does the new year begin? What season of the year is it on New-Year's Day? What kind of weather? Why were the people glad when New-Year's Day came? Why was the sparrow glad? How do we reckon time? What is an almanac? ("A thing to find our birthdays on," replied a child of five to this question.) When did the sparrows think the year began? When did the old sparrow say the spring came? What is a swallow? [Sketch a swallow, and make an almanac of the month February on the blackboard. Mark any child's birthday on it, and compare with the real almanac which hangs up in the classroom. Blackboard sketch—Almanac for February.]

RECAPITULATION.—Require children to tell this section in their own words, and correct the language.

(*c*) **The Contented Sparrow.**—"The country may be all very well," said a contented sparrow, "but I like the town best. Some very sensible people live in

* Swallow is substituted for the unfamiliar stork.

towns. A family in this neighbourhood have placed some flower-pots against the wall in their yard for us to make nests in. My husband and I had a nest in one, and all our little ones were brought up in it. The family take pleasure in watching us, and they scatter bread crumbs for us, so I think we shall stay where we are." But the others flew away into the country to see if spring was coming.

Questions.—What did the contented sparrow say? How did the kind people make places for the sparrows' nests? [Illustrate by a real flower-pot against the wall, and draw a blackboard sketch of flower-pots against the wall.] How were the sparrows fed in winter? Who feeds the birds in winter? [Blackboard sketch of town house.]

Recapitulation, in children's own language.

[Two or three lessons will be required to work through Step II.]

Step III.—Association.

Teacher requires children to compare the grumbling sparrows with the contented sparrow. This will probably require a whole lesson to work out fully.

Grumbling Sparrows.	Contented Sparrow.
1. Complained that the new year was no better than the old.	1. She pointed out that in towns there were kind friends.
2. That the almanac was wrong.	2. Safe flower-pots for the nests.
3. That they were cold and hungry.	3. Crumbs in cold weather.
4. That the spring and the swallows did not come.	4. She was not impatient, but grateful for the comforts of the town.
5. They decided to fly to the country, because they were impatient.	

What ought we to do when we have troubles? (Make the best of them.) Is it brave to cry when

we are cold or hurt? Which do you think was the wiser—the grumbling sparrows or the contented one? What are we to learn from the story of the sparrows? [Children will readily formulate maxims on contentment. The teacher may sum up the idea in the words of St. Paul.]

STEP IV.—FORMULATION.

"I have learned, in whatsoever state I am, therein to be content."

STEP V.—APPLICATION, AND SUGGESTIONS FOR CONNECTING OTHER STUDIES.

1. Children may learn by heart:—

"When winter snows are on the ground,
The little robin redbreast grieves;
For then no berries can be found,
And on the trees there are no leaves.

"The air is cold, the worms are hid;
For this poor bird what can be done?
We'll strew him here some crumbs of bread,
And then he'll live till snows are gone."

2. **Word-building.**—(*a*) *Ground*, round, sound, found, pound, hound, mound.

(*b*) *Snow*, low, mow, grow, flow, crow, know, throw.

3. **Writing**—

Snow is on the ground.

4. **Language.**—Print on the blackboard sentences made by children:—

The winter was cold. The sparrows were hungry. We feed the birds with crumbs.

5. Picture Arithmetic—

METHOD WHOLE II.

STEP I.—PREPARATION.

Aim.—We shall hear how spring came, and the troubles of the sparrows were over.

What causes the snow to melt? Does the sun shine more in winter or in spring? What does the sun do to the earth? What are the plants and trees doing in winter? What do they do when the sun warms them? Where do the swallows come from? Why do they not remain here in winter?

Recapitulation, in children's own words. The following is an example:—

The sun shines more in spring than in winter, and the snows melt; and the sun warms the earth, and awakens the sleeping seeds and bulbs, and they send out tiny shoots and blossoms. The buds on the trees burst, and the swallows come from warmer countries. Then we know that spring is here.

STEP II.—PRESENTATION.

(*a*) **Town Sparrows in the Country.**—In the country it was colder than in town. The farmer beat his

arms across his chest to keep off the cold. The horses smoked as they ran. The snow crackled, and the sparrows hopped about shivering. "Tweet, tweet," they cried; "when will spring come?" High up on a heap of snow sat a wonderful old man all in white. He had on a white woollen coat, his long hair was white, and his face was pale. "Who is the old man?" the sparrows asked. The raven knew. He was a wise old bird who sat on a fence. "The old man is Winter," he said. "He is not dead yet, but the almanac says he is. He still rules here until the little prince Spring comes." [Blackboard sketch of a raven on a fence.]

"There," said the old sparrow, "did I not say that the almanac was invented by man, and was all wrong? Men should leave these things to us; we are cleverer than they are."

Questions. — What is a farmer? Why did the horses smoke? Why did the snow crackle? Did the sparrows find it warmer in the country? What was the wonderful old man like? Where was he sitting? Who was the old man? What is a raven? What did the raven tell them about the old man Winter?

Recapitulation from the children.

(*b*) **Winter prepares to depart.**—One week passed, and then another. The forests were dark, and the frozen lake lay like a sheet of lead. Thick mists hung over the land and hid the mountains. At last a sunbeam glided over the lake, and made it look like polished silver. Still the old man Winter sat on the hill, looking always towards the south. He did not notice how the snow seemed to sink into the

earth when the sun shone, and that green patches of grass appeared, upon which the sparrows hopped seeking for worms. "Teewit, teewit," they said; "spring is coming at last." [Blackboard sketch of old man Winter on the hill.]

Questions.—How many days are there in one week? How many days in two weeks? Why was the lake like a sheet of lead? Why were the mountains hidden? What did the lake look like when a sunbeam shone on it? Why did the old man look towards the south? What became of the snow when the sun shone? Why did the sparrows hop on the green patches of grass?

Recapitulation of this section of story, in children's own words.

(*c*) **The Coming of Spring.**—At last from the south came two swallows, each carrying on its back a beautiful child. The boy and the girl kissed the earth when they alighted, and wherever they trod white flowers came up through the snow. Hand in hand they walked to the old man Winter, and threw their arms about him. Then a mist came and covered them all. Afterwards a mighty wind arose and blew away the mist, and the sun shone warmly, and lo! Winter had vanished, and the beautiful children of Spring sat on the throne of the year.

"This is really the new year," chirped the sparrows. "Now we shall be happy after our sufferings in winter." [Blackboard sketch of swallows coming from the south.]

Questions.—What did the swallows bring from the south? What sprang up through the snow wherever the children trod? What do you think these flowers

were called? What covered the children and the old man Winter? What is a mist? [Refer to the mist which hid the mountains.] What is a throne? Who sits on a throne? What did the sparrows say?

RECAPITULATION.—Children tell the story in their own language.

(*d*) **The Work of Spring.**—Wherever the two children wandered the green buds burst out on the trees and hedges. The grass grew high, and the cornfields became a delicate green. The little girl had an apron full of flowers, which she scattered, and the more she scattered the more did her apron contain. The apple trees and cherry trees became pink and white with blossoms. Primroses, violets, and cowslips sprang up, and daffodils opened in full beauty. And the boy and the girl clapped their hands, and troops of birds came flying from nobody knew where, and they all twittered and chirped, "Spring has come."

The children seated themselves among the beautiful flowers, and sang, and laughed, and grew. The cuckoo called, and the lark sang from the blue sky above, for it was now beautiful spring. The careful willows covered their blossoms with woolly gloves, and the boy and the girl sat beneath the trees, and kissed each other, and were betrothed.

RECAPITULATION.—Various children should be required to tell the whole story. This exercise will take up a whole lesson.

STEP III.—ASSOCIATION.

Require the children to contrast the gloom of winter with the gladness of spring.

In Winter.	In Spring.
1. The days are cold and dark.	1. Days are warmer and brighter.
2. There are heavy snows.	2. Light showers.
3. Fogs and mists.	3. Bright sunshine.
4. Dark skies.	4. Blue and white skies.
5. Frozen lakes and rivers.	5. Rushing rivers and babbling streams.
6. Birds cannot get food, because the ground is frozen.	6. Birds can get worms and in sects.
7. Trees black and bare.	7. Trees bursting into buds and leaves.
8. No swallows and no cuckoo, and the lark rarely sings.	8. Swallows and cuckoo come, and the lark sings in the sky.
9. No flowers in the fields and forests.	9. Snowdrops, violets, primroses, daffodils, and cowslips bloom.
10. Cold winds from the north.	10. Soft winds from the south.

Lead the children to feel the beauty and gladness of the springtime, and formulate from the Song of Solomon.

Step IV.—Formulation.

"Lo, the winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come" (Song of Sol. ii. 11, 12).

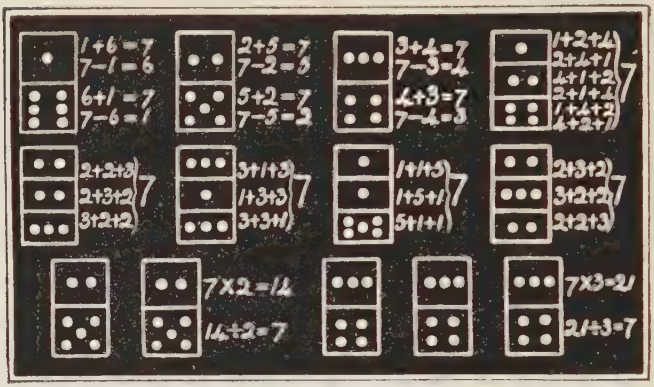
Step V.—Application, and Suggestions for Connecting other Studies.

1. Require children to learn by heart the following selections:—

"The year's at the spring,
And day's at the morn," etc.
Browning.

"The sun doth arise
And make happy the skies;
The merry bells ring
To welcome the spring," etc.
Blake.

2. Picture Arithmetic.—*Exercises in number 7.*



3. Lessons in connection with the Almanac.—(*a*) Children learn to print the names of the days of the week.

(*b*) Make an almanac for the week and the month in which the lesson is given. February 1900 was the date when we gave the lesson.

Monday	—	5	12	19	26
Tuesday	—	6	13	20	27
Wednesday	—	7	14	21	28
Thursday	1	8	15	22	—
Friday	2	9	16	23	—
Saturday	3	10	17	24	—
Sunday	4	11	18	25	—

Each child may make an almanac for himself. Mark birthdays on it.

4. **Geography Suggestions.**—"The old man looked towards the south." Simple explanation of points of compass. [Game "North, South, East, and West" with four children.]

"The frozen lake lay like a sheet of lead." Model a lake in sand. Explain simply work of frost.

"Thick mists hid the mountains." Model mountains. Explain mists.

5. **Drawing.**—Sparrows, swallows, flower-pots, nests, etc.

ANALYSIS OF STORY OF "THE SNOWDROP."

Central Idea: Courage and Hope.

STEP I. PREPARATION.

STEP II. PRESENTATION.—
- (*a*) The Snowdrop awakes.
- (*b*) The Snowdrop blossoms.
- (*c*) What the Sunbeams said to the Snowdrop.
- (*d*) What the Wind said to the Snowdrop.
- (*e*) What became of the Snowdrop.

STEP III. ASSOCIATION.—Compare and contrast with the story of "The Ugly Duckling."

STEP IV. FORMULATION.—"Courage and hope win through the darkest day."

STEP V. APPLICATION.—Drawing, Painting, Language, Number, etc.

STEP I.—PREPARATION.

Aim.—To learn how a brave little snowdrop grew up in the snow to be a joy to all who saw it.

What is a snowdrop? What colour is it? Why do we give it that name? In what month does the snowdrop blossom? What kind of weather have we then? At what time of year do other flowers grow?

Recapitulate, and arrange children's ideas on the snowdrop.

Step II.—Presentation.

(*a*) **The Snowdrop awakes.**—It was winter time. The air was cold, and the keen wind whistled in cutting blasts, but inside it was as warm and cosy as possible. The snowdrop was inside her house. She lay curled up asleep in the bulb, deep down in the earth, underneath a blanket of thick snow. The winter passed away; the rain fell in gentle drops through the snow, trickled down to the bulb, and told her about the pleasant world above. The sunbeams pierced through the snow, kissed the bulb, and the little flower-germ within awoke.

"Come in," said the flower to the sunbeams.

"I can't," said one of the warm sunbeams; "I am not strong enough yet to open the door of your house."

Questions.—Where was the snowdrop in winter? What is the house of the snowdrop like? [Show a bulb, and require children to describe it. Draw a section of the bulb on the blackboard. Compare with an onion.] What was the snowdrop doing in her house? [Draw section, and show how the baby plant is snugly hid inside.] What covered the earth? When the snow melted, what came to the bulb? (A raindrop.) How did the raindrop get down to the bulb? What did the raindrop tell the bulb? What came to the bulb next? (A sunbeam.) What did the sunbeam do? (Kissed the bulb, and the kiss awoke the tiny baby flower inside.) What did the flower say to the sunbeam? Why didn't the

sunbeam come inside? [Draw attention to the strong walls of the snowdrop's house.]

Recapitulate.

(*b*) **The Snowdrop blossoms.**—Then the little flower tried to stretch herself and get out, but she had to wait until the sunbeams burst open the bulb, and then she shot up from under the snow a green and white blossom on a slender stem, guarded on all sides by close, thick leaves.

The snow was cold, and almost forced her back; but the sunbeams shone on her, and sang, "Welcome, welcome!" and cheered her with loving caresses as she rose higher and higher out of the earth, till at last the petals opened wide, and a flower white as snow, with pale-green stripes, appeared, hanging her little head in shyness and gladness.

Questions.—What did the snowdrop try to do? Why couldn't she get out? What did the sunbeams do to the bulb? What was the snowdrop like when she came up through the snow? Did she like coming? (No; the snow was so cold she was almost forced back.) Who encouraged her to bear the cold? What did the sunbeams say to her? What was the snowdrop like when she opened her petals? Why did she hang her head?

Recapitulate.

(*c*) **What the Sunbeams said to the Snowdrop.**—"Lovely little flower," sang the sunbeams. "How fresh and delicate you are! You are the very first blossom. Presently the beautiful flowers of summer will come to gladden the whole world. Soon you will have friends in plenty—roses, lilacs, and laburnums—but you are the first, the tenderest and most loved of all."

The little snowdrop was filled with joy at these kind words. There she stood in her white dress and green ribbons, proclaiming the coming of summer.

Questions.—What did the sunbeams say to the snowdrop? What do you mean by "fresh"? [Illustrate by a fresh pinafore and a soiled one.] Why did the sunbeams say the snowdrop was delicate? (She was so slender and pale.) Was she really delicate? How do you know she was not? (Because she came up through the snow.) Which is the very first blossom of spring? What flowers come later? What kind of flower is a rose? A lilac? A laburnum? Which flower did the sunbeams love best? (The snowdrop.) Why? (Because she was the first.)

How did the snowdrop feel when the sunbeams said these kind things? What message did she bring to the world? (The message that summer was coming.)

Recapitulate.

(*d*) **What the Wind said to the Snowdrop.**—Soon the angry wind and the blustering storm came, and tried to break the little snowdrop.

"You have come too soon," cried the wind; "you shall break or die."

And the bitter blasts blew around the delicate little snowdrop; but she stood there bravely, bending her little head in humility as the snow fell thick around her and the cruel wind swept over her.

"Summer fool" the angry wind called her, as he tried to break her slender stem.

Questions.—What kind of noise does the wind make when he comes? What do you mean by "bluster"? Why did the wind try to break the

snowdrop? What did he say to her? Why was the wind angry? What did the wind do? (He blew on the snowdrop, and tried to break her.) What did the snow do? (It fell thickly upon her.) What did the poor snowdrop do? (She bent her little head and bore it bravely.) What did the wind call her? Why did he call her a "summer fool"? (He was angry with her because she showed that spring was coming.)

Recapitulate.

(*e*) **What became of the Snowdrop.**—The children found her in the garden peeping above the snow, and they said, "How lovely, how charming it is! the first, the only one."

A little maiden picked her carefully, kissed her, and carried her in a warm hand into a pleasant room. She was then placed lovingly in a vase of cool, refreshing water.

Then the little maiden wrapped her in scented paper and put her in an envelope, and sent her to a dear, dear friend.

The snowdrop now took a long journey in a mail-bag, and had to be stamped and crushed.

The friend kissed the flower, and put it into a casket among some other letters, where it lay for a long, long time, until one day the letters were taken out and thrown into the fire; but the flower fell on the floor, and was left there.

The housemaid came in to sweep the floor, and she picked it up carefully and placed it between the leaves of a book of great poems. And there she lay happy for ever among the beautiful verses. This is the tale of the snowdrop.

Questions.—Who found the snowdrop at last? What did they say about her? What did they do with her? What did the little girl do after she had plucked her? Where did she put her? Why do we put flowers in water? (Because they will die at once if we do not. We must always be careful to put all cut flowers in water at once.) What did the little girl do with the snowdrop next day? Why did she send her to her dear friend? (To remind her that winter was over.) What became of the letter? What happened to the snowdrop in the mail-bag? What did the friend do with the letter? What is a casket? After a long, long time, what became of the letter? Where did the snowdrop fall? Who found it? What did the housemaid do with it? (Placed it between the leaves of the book of a great poet.) What is a poet? Can you tell me the name of any great English poet? How did the snowdrop end its days? (It ended its days among the beautiful verses of a great poet; and the little snowdrop understood the verses in its own fashion, and was very glad.)

Step III.—Association.

Compare and contrast the story of "The Ugly Duckling" with the story of "The Snowdrop," if the former is already familiar to the children; if not, the teacher must choose some story known to the children —for example, "Cinderella."

Comparison.—1. The angry wind tries to break the snowdrop; calls her hard names. She is afterwards thrown away, and she falls upon the floor; yet no

harm befalls her, and she ends her life happily in living among beautiful poems in a book.

2. The ugly duckling is unkindly treated by all; yet his troubles end, and he becomes a beautiful swan, and lives happily.

Contrast.—1. The snowdrop is brave and hopeful. She fights her way through all her difficulties.

2. The ugly duckling is timid and despairing. He runs away from his troubles.

Which do you admire most—the snowdrop or the duckling?

Accept children's statements, and sum up in the following proverb.

Step IV.—Formulation.

"Courage and hope win through the darkest day."

Step V.—Application.

1. Drawing, painting, word-building, language, number, singing, etc., as before.

2. Learn by heart "The Snowdrop."

ANALYSIS OF "THE UGLY DUCKLING."

(*Selections.*)—Hans Andersen

METHOD WHOLE I.—Central Idea: Mother's Love for her Children.
METHOD WHOLE II.—Central Idea: Kindness to all Creatures.

Method Whole I.

Presentation.—1. The Ugly Duckling is born.

(*a*) Mother Duck on her Nest.
(*b*) Young Ducks are hatched.
(*c*) Ugly Duckling is hatched.

2. The Ugly Duckling is educated.
   (*a*) Ducklings at the pond.
   (*b*) The Ugly Duckling shows he is not a turkey.
   (*c*) Ducklings are taught company manners.
   (*d*) The Ugly Duckling is despised.

ASSOCIATION.—Comparison between kindness of Mother Duck and child's own mother.

FORMULATION.—"Be kind to thy mother."

METHOD WHOLE II.

PRESENTATION.—1. The Moor and the Wild Ducks.
   (*a*) He comes to a Moor.
   (*b*) He meets the Wild Geese.
   (*c*) The Sportsmen.

2. The Old Woman, the Tomcat, and Hen.
   (*a*) The Old Woman's Cottage.
   (*b*) How the Duckling was treated.
   (*c*) Why it ran away.

3. The Swans and a Hard Winter.
   (*a*) He meets the Swans.
   (*b*) He is frozen in the Ice.
   (*c*) He is rescued.
   (*d*) The Peasant's Cottage.

4. Spring and the Swans.
   (*a*) The Coming of Spring.
   (*b*) The Beautiful Swan.
   (*c*) He becomes a Swan himself.

ASSOCIATION.—Comparison with the story of Cinderella.

FORMULATION.—"To show kindness to strangers forget not: for men have thereby entertained angels unawares."

METHOD WHOLE I.

STEP I.—PREPARATION.

Aim.—We are going to see how a mother duck brought up her family.

What is a duck? How does it differ from a hen? What do we call a young duck? What do we call a young hen? Where do ducklings and chickens come from? Who has seen a hen's egg? Who has seen a duck's egg? What difference is there between them? What other creatures come from eggs?

Sum up the children's ideas on birds of the farmyard into an orderly summary.

Step II.—Presentation.

The Ugly Duckling is Born.

(*a*) **Mother Duck on her Nest.**—The mother duck sat on her eggs for many a day, she was so lonely, and none of the other ducks came to visit her; they liked best swimming about on the pond, and gossipping among the reeds and the rushes.

Questions.—Why did the mother duck sit on her eggs? (To keep them warm.) Why is warmth good for eggs? What would happen if the mother duck got up and went away for a time? Did she like sitting on her eggs? Had she many visitors? Why not? Would the mother duck have liked to go swimming with the rest? What are reeds and rushes? [Blackboard sketch of mother on her nest.]

Recapitulation from children.

(*b*) **Young Ducks are hatched.**—At last one egg after another cracked and opened, and then, "Peep, peep," a little head was thrust forth from every shell.

"Quack! quack!" said the mother duck; and then they all quacked as well as they could, staring about with their bright eyes, and examining the green leaves. Their mother allowed them to look at the leaves as long as they liked, for green is good for the eyes.

Questions.—What cracked the egg? What came out of the shell first? What did the young duck say when it put its head out? What did the mother duck say? What did the young ducks do when they

were all hatched? What did they see when they looked around? Why did the mother duck like them to look at the green leaves? [Blackboard sketch of young duck coming out of the egg, or of young ducks looking at the reeds and the rushes.]

Pause for recapitulation and remarks from the children.

(*c*) **Ugly Duckling is hatched.**—"Are you all here now?" said the mother duck, standing up. But no; there was the largest egg lying at the bottom of the nest unhatched.

"I'm so tired," she said, and she sat down on the nest again.

"How are you getting on?" asked an old duck, who came to pay her a visit.

"I am quite tired waiting for this egg, which will not hatch," said mother duck. "But look at the others. Are they not little beauties?—the very prettiest ducklings that were ever seen."

At last the big egg chipped and opened.

"Peep, peep," cried the late duckling as it wobbled out of the shell.

How big and ugly it was! The mother stared at it in amazement. "It is not a bit like the others," she said. "I wonder if it is a turkey. Well, I shall find out when I take my little ones to the water."

Questions.—What did the mother say when she saw her little ducklings? Were all the eggs hatched? Which was left? What did the mother duck say? What did she do? Did she complain? Do mothers complain when they are tired? Why was she tired? Who came to visit her at last? What did she say? What did mother duck reply? What did she call her

young ducks? What did the late duckling say when he came out of his shell? What did his brothers and sisters say? What was he like? What did the mother think he was? What is a turkey like? How did the mother think she would find out if he were a turkey? Can ducks swim? Can hens swim? Can turkeys swim? [Blackboard sketch of the duckling family despising the ugly duckling.]

Recapitulation from the children.

The Ugly Duckling is Educated.

(*a*) **The Ducklings are taken to the Pond.**—On the next day the weather was fine, the sun shone delightfully, and the mother duck took her little ones down to the water, and jumped in with a splash. "Quack! quack!" she cried, and one after another the little ducklings jumped in. The water closed over their heads, but they came up again in an instant, and swam about quite prettily, with their legs paddling under them as easily as possible; and the ugly duckling was also in the water, swimming with them.

Questions.—When did the mother take her children to the pond? What sort of day was it? Who jumped in first? What did she say? What did the little ducklings do? Who has seen a duck swim? Why can they swim so easily? What are a duck's feet like? How does he use them? Did the ducklings sink in the water? Why not? Do ducks go under the water at all? [Blackboard sketch of a duck's foot.]

(*b*) **The Ugly Duckling shows he is not a Turkey.**—"Oh," said the mother, "that is not a turkey. How well he uses his legs, and how upright he holds him-

self! He is my own child; and he is not so very ugly after all, if you look at him properly."

Then the mother duck took her little ones into the farmyard to introduce them to society.

"Turn out your toes," she said, "like well-bred ducklings. Now bend your necks and say 'Quack.'"

Questions.—Could the ugly duckling swim? What did his mother think of him then? How did she know now that he was not a turkey? Did she call him ugly? Do mothers love their pretty children best? [Blackboard sketch of the duckling family swimming on the pond.]

(*c*) **The Ducklings are taught Company Manners.**—The ducklings did as they were bid, and the other ducks stared and said, "Look, here comes another brood." When they saw the ugly duckling, they said, "What a queer-looking object one of them is! we don't want him here;" and then one flew out at the ugly duckling and bit him in the neck.

"Let him alone," said the mother.

"He is so big and ugly," said the spiteful duck, "that he must be turned out."

Then the high-born old Spanish duck complained that he was not pretty; and the mother tried to excuse him.

"He is not pretty," she said, "but he has a good disposition, and he swims quite well. He has remained too long in the egg, and his figure is spoiled."

Questions.—Where did the mother duck take her children next? Why? What other animals live in a farmyard? How did the duck teach her children to walk? How were they to greet their friends? How do we greet our friends? What did the duck-

lings say to their friends? What do we say to ours? What did the other ducks say? What is a brood? [Blackboard sketch of mother duck teaching her children manners.]

(*d*) **The Ugly Duckling is despised.**—The poor ugly duckling had a bad time of it. He was bitten, and pushed, and made fun of by all the ducks and poultry in the yard.

Every day they were more unkind to him; and even his brothers and sisters said to him, "Ah, you ugly thing! I wish the cat would get you." And the girl who fed the ducks kicked him away with her feet.

At last he could bear it no longer, so he flew away.

Questions.—What did the other ducks say when they saw the ugly duckling? What did one of them do to him? Who took his part? What did she say? Who would take your part if people called you names? Why did the spiteful duck want to turn him out? May we ever be unkind to living creatures? Who else complained that he was ugly? Who else said that he was ugly? What did his mother say about him? What reason did she give for his being ugly? How did his brothers and sisters treat him? How did the girl who fed the ducks treat him? How did the poor ugly duckling feel? [Blackboard sketch of the ducklings ill-treating the ugly duckling.]

Recapitulation of the whole of the story so far, in the children's own words.

Step III.—Association.

Bring out points to show the kindness of the mother duck.

Who was the ugly duckling's kindest friend? (His mother.)

How was she kind to her children? (1. She sat for many days on her eggs to hatch them. 2. When she was tired she went on sitting to hatch the big egg. 3. She was very fond and very proud of her children. 4. She made excuses for the ugly duckling when everybody else called him ugly. 5. She taught her children to be polite, to walk properly, and to speak properly.)

What does your mother do for you? [Children point out that mother makes their frocks and pinafores; that she washes them, dresses them, brushes their hair, prepares breakfast, takes care of them when they are sick, teaches them to be polite and to talk nicely, sends them to school and takes them to church, and is kind to them when other people are unkind.]

Step IV.—Formulation.

What will you do for mother when you grow up and she is old? [Children will readily express how they intend to show their gratitude to their mother.]

This may be summed up and learned by heart in the lines,—

> "Be kind to thy mother, for when thou wert young,
> Who loved thee as fondly as she?"

Step V.—Application.

1. Language.—Children may tell the story as oral composition. They may make sentences on the story, to be written and printed.

2. **Painting and Brush Drawing.**—Reeds and rushes; eggs; young ducks swimming.

3. Modelling eggs, and chickens and ducks coming out of eggs.

4. Learn by heart "Dame Duck."

METHOD WHOLE II.

Step I.—Preparation.

Aim.—We are going to learn how the ugly duckling had many trials, and in the end became very happy.

Why was the ugly duckling unhappy? Why did he run away from the farmyard? What are swans? Where have you seen them? How do they differ from ducks?

An orderly recapitulation of children's ideas on swans and ducks.

Step II.—Presentation.

The Moor and the Wild Ducks.

(*a*) **He comes to a Moor.**—He flew on and on until he came to a moor inhabited only by wild ducks. Here he stayed all night, feeling tired and sad.

In the morning the wild ducks came and stared at him. "What sort of a duck are you?" they said. The poor duckling bowed politely, and did not reply. "You are very ugly," said the wild ducks, "and you must not try to marry one of our family."

Questions.—Where did the ugly duckling fly when he left the farmyard? What is a moor? Who has seen one? What flowers grow on a moor? What

animals live on a moor? What kind of creatures lived on this moor? How long was the ugly duckling alone on the moor? Why was he not happy? Why was he tired and sad? What did the wild ducks say to him? [Blackboard sketch of a wild duck.]

Recapitulation.

(*b*) **He meets Wild Geese.**—After two days some young wild geese persuaded the ugly duckling to fly with them to another moor.

Questions.—What other creatures came to the moor? What is a goose? What is a wild goose? Point out differences between a goose and a duck. [Pictures and blackboard sketches.]

Recapitulation.

(*c*) **The Sportsmen.**—"Pop, pop," sounded in the air, and the wild geese fell dead among the rushes, and the water was tinged with blood. "Pop, pop," echoed far and wide in the distance, and whole flocks of wild geese rose up from the rushes. The sportsmen surrounded the moor, and they shot from all sides. How terrified the poor duckling was! He hid his head under his wing just as a large and terrible dog passed quite near him. The dog's jaws were open, his tongue hung from his mouth, and his eyes glared fearfully. But he passed the duckling without touching him.

"Oh," sighed the duckling, "how thankful I am for being ugly! Even a dog will not bite me."

He lay quite still all day while the shot rattled through the rushes. Then in the evening he flew away from the moor as fast as he could. A storm arose, and the poor thing could hardly struggle

against it. At last he reached a poor little cottage, and he managed to creep inside and obtain shelter from the violent storm.

Questions.—What terrible noise sounded in the air? What made the noise? What happened to the wild geese? Who fired the guns? What is a sportsman? Why did the sportsmen shoot the geese? Why did the geese rise up from the rushes? What would the sportsmen do when the geese rose up? Why did the sportsmen surround the moor? Why was the duckling terrified? What animal came along? To whom did the dog belong? Why do sportsmen have a dog? [Show pictures; discuss various dogs used for setting and pointing.] What did the dog look like? Did he touch the duckling? Why not? What did the duckling say? How long did he stay on this moor? [Blackboard sketch of sportsmen's guns and dogs.]

Recapitulation.

The Old Woman, the Tomcat, and the Hen.

(*a*) **The Old Woman's Cottage.**—An old woman, a tomcat, and a hen lived in this cottage. The old woman loved the tomcat, for he could raise his back and purr, and could even throw out sparks from his fur if it were stroked the wrong way. The hen laid good eggs, and the mistress loved her as if she had been her own child.

Questions.—What happened when he flew away from the moor? What is a storm? Where did he find shelter? Who lived in the cottage? Who lived with the old woman? What could the cat do? What could the hen do? Why did the old woman

love the cat and the hen? [Blackboard drawing of the cat and hen.]

Recapitulation.

(*b*) **How the Duckling was treated.**—In the morning they found the ugly duckling, and the tomcat began to purr, and the hen to cluck.

"Oh, what a prize!" said the old woman. "I hope it is not a drake, for then I shall have some duck's eggs."

The duckling was allowed to remain for three weeks, to see if he could lay duck's eggs; but he could not. The tomcat was master of the house, and the hen was mistress, and the duckling was not allowed to say a word.

"Can you lay eggs?" the hen would ask him.

"No."

"Then have the goodness to hold your tongue."

"Can you raise your back, or purr, or throw out sparks?" said the tomcat.

"No."

"Then do not talk."

Questions.—What did the cat do in the morning when the duckling was found? What did the hen do? What did the old woman say? Why was she pleased? How long did she let the duckling stay? Could he lay eggs? Who was master in the house? Who was mistress? Did the duckling have a good time? What did the hen ask him? What did the cat ask? What did they say when he tried to answer?

(*c*) **Why it ran away.**—So the duckling sat in a corner feeling low-spirited, till the sunshine came into the room, and then he longed for the water so much that he could not help telling the hen.

"Foolish fancies," said the hen, "because you have nothing to do. If you could purr or lay eggs, they would pass away."

"But it is so delightful," said the duckling, "to swim about on the water and to dive."

"Delightful indeed," said the hen. "Ask the cat; he is the cleverest animal I know. Ask him how he would like to swim about on the water and to dive. Ask our mistress, the old woman; there is no one in the world more clever than she is. Do you think she would like to swim or to dive?"

"You don't understand me," said the duckling.

"Nonsense," said the hen. "I advise you to learn to purr and to lay eggs as quickly as possible, and not chatter nonsense."

"I believe I must go out into the world again," said the poor duckling.

"Yes, do," said the hen.

Questions.—What made the duckling less miserable; What did the sunshine make him long for? Whom did he tell? What did the hen say? Could the duckling purr or lay eggs? Why not? Why was the duckling to ask the cat? Does a cat like water, and can it swim and dive? Could the old woman swim and dive? Did the duckling get any sympathy? Why did he think he must go out into the world again? Did the hen urge him to go?

The Swans and a Hard Winter.

(*a*) **He meets the Swans.**—So the poor duckling went away and dived and swam in the water; but every living thing ran away from him because he was so ugly. One evening in autumn, when the sun was

setting, a flock of beautiful birds came out of the forest. They were of dazzling whiteness, with long, arched, beautiful necks. These were swans, and they were flying away from the cold countries to warm and sunny seas for the winter. The poor duckling watched them with wonder, and longed to go after them. He never forgot those beautiful birds, and he loved them as he had never loved anything before.

Questions.—Why did all creatures run away from the duckling? What time of the year was it now? At what time of the day does the sun set? What beautiful sight did the duckling see one evening? What were the birds like? Where did they come from? What were they? Where were they flying to? Why would they not stay at home in winter? How did the duckling feel when he saw them? Why did he remember and love them? [Blackboard sketch of swans.]

Recapitulation.

(*b*) **He is frozen in the Ice.**—The winter came on; it was very cold, and the poor duckling had to swim round and round in the water to keep himself from being frozen. At last, one cold night, he was so tired that he lay quite still, and was frozen tight in the ice.

Questions.—What season comes after autumn? What season comes before? When was the duckling born? Where was he in autumn? Did he like the winter? Why not? What is the best way of keeping warm in winter? Do you feel cold when you are sliding and snowballing? What did the duckling do to try to keep warm? What happens to water in very cold weather? How did the duck-

ling try to keep the water from freezing over? Could you run about all night as well as all day? What happened to the duckling when he was too tired to swim at night? [Blackboard sketch of duckling frozen in the ice.]

(*c*) **He is rescued.**—The next morning, a peasant who was passing broke the ice with his wooden shoe, and took the poor dead bird home to his wife.

Questions.—What would have happened to him if he had stayed there frozen in the ice? Who came along in the early morning? What is a peasant? How did he break the ice? What was his shoe made of? What are your shoes made of? Why do people wear wooden shoes? What did the peasant do with the duckling? Why? (To eat.) Was the duckling really dead? What made him look as if he were dead? [Blackboard sketch of wooden shoes.]

Recapitulation.

(*d*) **In the Peasant's Cottage.**—But the warmth revived him; and when the children wanted to play with him, the poor frightened bird fluttered into the milk-pail and scattered the milk. The woman clapped her hands at him, and this frightened him so much that he flew into the butter-jar, and then into the flour-barrel. What a fright he looked, to be sure! The woman ran after him with the tongs, and the children ran about yelling and laughing, trying to catch him. At last the poor thing got away, and lay down in the snow, worn out and unconscious.

Questions.—Did the peasant take him home out of kindness? What did the peasant's children want to do with him? Were these the first people the duckling had met? (No.) Enumerate. (The girl who

fed the ducks, the sportsmen, the old woman, and now the peasant and his family.) Do you think the duckling had reason to be afraid of people? Why was he afraid of the children when they wanted to play with him? Where did he fly to in his terror? What is a milk-pail? [Draw one.] What happened to the milk when he fluttered in? How did the woman show she was angry? Where did he fly next? and next? (Into the butter-jar and the flour-barrel.) [Draw these.] Where did he escape to at last? [Blackboard sketches of milk-pail, butter-jar, flour-barrel.]

Recapitulation.

(*e*) **The Coming of Spring.**—It would be too sad to tell all the sufferings and misery of the duckling during the winter. When the spring came, and the sun shone warmly, the poor thing was lying dreamy and half alive among the reeds on the moor.

He shook out his wings; they had grown broader and stronger, and they carried him swiftly to a large garden, where the apple trees were blooming, and the sweet lilacs scented the air, and hung their green branches down to the water's edge. Everything was beautiful with the freshness of spring, and out from among the trees there sailed on the water three splendid swans. The poor duckling knew them again, and felt strangely unhappy.

"I will fly to those royal birds," he said. "They will perhaps kill me because I am so ugly, but I had rather be killed by them than suffer so many hardships and miseries."

And so he ran down to the water and swam out towards them. They saw him, and came to meet him.

"Kill me," he said; "I only ask to die," and he bent his head to receive the death-stroke.

He saw his own image in the crystal water, and instead of seeing an ugly, clumsy gray bird, he saw a beautiful, graceful white swan. Yes, the poor ugly duckling was really hatched from a swan's egg. The other swans stroked him with their beaks, and welcomed him; and the children came and gave him bread and cake.

"Look," they said, "the new swan is the loveliest of all—so young and so handsome."

And the young swan hid his head under his wing and felt happy, but not proud.

"I never dreamed that so much happiness would be mine when I was an ugly, despised duckling," he said.

Questions.— What season comes after winter? Where was the duckling when the spring came? What does the cat do after she has been asleep on the hearthrug? (Stretches.) When the duckling stretched and shook his wings, what did he find? Where did he fly to? What trees grew in the garden? What flowers? How did the duckling know it was spring? What kind of flowers grow on the apple tree? What is the lilac like? What other beautiful things were in the garden? (Swans.) Had he ever seen swans before? Where? When? Did it make him happy to see them? Why not? What did he make up his mind to do? What did he think the swans would do to him? Why? Then why did he go to them? When he bent his head before them, what did he see in the water? (A picture of himself.) What was it like? How did

he feel? How did the swans treat him? And the children? [Blackboard sketch of the swans.]

Recapitulation.

Step III.—Association.

Compare and contrast the story of Cinderella and the story of the Ugly Duckling.

Cinderella.	Ugly Duckling.
1. Cinderella's step-mother was harsh and unkind.	1. Ugly duckling's step-mother was his best friend.
2. People thought Cinderella ugly, and only fit for the kitchen.	2. People thought the duckling ugly, and not fit for society.
3. Cinderella was despised by mother and sisters.	3. Ugly duckling despised by sisters, brothers, and companions.
4. Troubles of Cinderella:—	4. Ugly duckling's troubles:—
(*a*) Put to do kitchen work.	(*a*) Girl in farmyard kicks him.
(*b*) Poor clothes to wear.	(*b*) Companions peck at him.
(*c*) Bad food to eat.	(*c*) Wild ducks on moor despise him.
(*d*) Not allowed any pleasure.	(*d*) Old woman, cat, and hen treat him unkindly.
(*e*) Hidden away when the prince comes.	(*e*) Peasant's wife is angry with him.
5. Cinderella became very happy, and married a prince.	5. Ugly duckling became a beautiful swan, and was very happy.

Why were Cinderella and the ugly duckling so badly treated? (Because people thought they were ugly and incapable.)

Lead the children to see that what may not seem attractive to us may turn out to be very beautiful and good.

Step IV.—Formulation.

The children will readily be led to see that it is our duty to be kind to all God's creatures, and not to despise and ill-treat anybody because we think him

ugly. Require them to learn by heart—"To show kindness to strangers forget not: for men have thereby entertained angels unawares."

Step V.—Application.

1. **Language.**—Oral reproduction of various portions of the story. Sentences written and printed by children.

2. **Free Drawing.**—Old woman's cottage, peasant's cottage, etc.

3. **Brushwork.**—Swan, dog, ducks, reeds, rushes.

4. **Cardboard Modelling.**—Furniture in old woman's cottage.

ANALYSIS OF "THE PEA BLOSSOM."

Hans Andersen

Central Idea: Value of Humble Work.

Step I. Preparation.—Analysis of Children's Ideas.

Step II. Presentation.—
- (*a*) Five Peas at Home.
- (*b*) The Peas start on their Travels.
- (*c*) How the Travels ended.
- (*d*) The Journey of the Fifth Pea.
- (*e*) The Work of the Fifth Pea.

Step III. Association.—Comparison of the character, aims, and destiny of the five peas.

Step IV. Formulation.—"Content to fill a little space,
If God be glorified."

Step V. Application.—Repeating Poems; Story of Theocrite; Pic ture Arithmetic; Drawing, Painting, etc.

Step I.—Preparation.

Aim.—We are going to hear the story of five peas, and the use they were of in the world.

Questions.—What are peas? Where do we find

them? Of what colour are they? How many are there in a pod? What do we do with peas? ("Eat them," "Plant them," "Put them into soup," "Shoot them out of a pea-shooter." *) What time do we plant peas? When do we gather them? What are the peas like when they are ripe? What kind of flowers grow on the pea plant? When do the flowers bloom?

Recapitulate chief points, and require connected narrative from individual children.

Step II.—Presentation.

(*a*) **Five Peas at Home.**—Once there were five peas in one pod. They were green, and the shell was green, and they thought that the whole world was green. The pod grew, and the peas grew, and sat all in a row. The sun shone without, and warmed the shell, and the rain made it clear; and the peas sat there growing bigger and bigger, and they wondered what work there was for them to do in the world. "Are we to sit here for ever?" asked one. "We shall become hard with so much sitting. It seems to me there must be something outside."

The weeks passed on, and the peas became yellow and the shell became yellow. "All the world is turning yellow," they said; and perhaps they were right. Suddenly they felt a pull at the shell: it was torn off and slipped into a jacket pocket in company with other pods. "Now we are going to be opened," said one. "I wonder which of us will travel farthest," said the smallest pea. "What will happen will happen," said the largest pea.

* All these answers were received from children of six.

Questions.—Of what colour were the peas and the shell? What colour did the peas think the world was? What made the peas grow? How did they sit as they were growing? What did they think about? Why did they think they would get hard? Are hard peas good to eat? Do we plant soft or hard peas? Why did the peas begin to get yellow? What colour did they think the world was now? What happened to them presently? Who do you think pulled the pod? Where did he put it? Why did he want it? Were the peas glad that they were going to travel? [Blackboard sketch of a pea-pod closed; also of a pea-pod open, showing the five peas. These should be rapidly sketched as the teacher talks.]

Recapitulation, in children's own words.

(*b*) **The Five Peas start on their Travels.**—Crack went the shell as it burst, and the five peas rolled out into the bright sunshine. They lay in a child's hand, and he said they were fine peas for his pea-shooter.

The boy put one into his pea-shooter and shot it out.

"Now I am flying into the wide world," he said. "Catch me if you can," and he was gone.

"I mean to fly straight into the sun," said the next pea, and away he went.

The next two peas were lazy. They said, "We will go to sleep whatever happens, but we shall go farther than the others."

"What will happen will happen," said the last and the largest pea, as he was shot out of the pea-shooter.

Questions.—What did the boy do with the pea-pod? What did he say about the peas? What is a pea-

shooter? [Teacher may make one, or draw it on the blackboard.] What did the first pea say? Where did the second pea say he was going? What do you know of the two next peas? What did the last pea say? [Blackboard sketch of the five peas. Teacher draws with green chalk.]

RECAPITULATION.—Require children to tell the story of how the five peas started on their travels.

(*c*) **How the Travels ended.**

First Pea.—The first pea, who said, "Catch me if you can," fell into a gutter on the roof of a house, and a pigeon flew by and spied him, and ate him.

Second Pea.—The second, who meant to fly to the sun, fell into the sink, and there he lay in the dirty water for days and weeks, and he swelled and swelled until he was a great size. "I am getting beautifully fat," he said. "I expect I shall burst at last, and no pea could do more than that, I think. I am the most remarkable of the five peas," and he puffed with pride.

Third and Fourth Peas.—The lazy peas were also carried up to a roof, and were eaten by pigeons; so they were at least of some use in the world, while the proud pea in the sink was not.

Questions.—What became of the first pea? What is a roof? and a gutter? What is the use of a gutter? What are pigeons? Was the first pea of any use? What became of the second pea? (He was a boastful, proud pea, and he came to a bad end.) Was he of any use in the world? Did he think he was of any use? What do you know of the third and fourth peas? Why do you think they were lazy? [Blackboard sketch of roof and pigeon.]

(*d*) **The Journey of the Fifth Pea.**—The fifth pea was the big one. He flew up against an old board under a garret window, and fell into a tiny crack which was filled up with moss. He lay there still and unnoticed; but God saw him. In the garret lived a poor woman, who went out to work every day. Her daughter was weak and ill, and she had lain in bed for a whole year. "She will die like her little sister," thought the poor mother. And the sick girl lay patiently in bed all day, while her mother was away working.

Questions.—Where did the fifth pea go? What did he say as he started? What is a garret? Where did the pea fall? What would be likely to be in a tiny crack? (Earth and moss.) Could the pea grow in earth and moss? Did any one see the pea as it lay in the crack? Who lived in the garret? What do you know about the poor woman and her daughter?

Recapitulation.

(*e*) **The Work of the Fifth Pea.**—Spring came at last, and the sick girl said one day, "Mother, what is that little green thing that peeps in at the window and moves in the wind?"

"It is really a little pea that has taken root in the crack," said the mother. "Well, now, there is a little garden to amuse you." And the mother moved the sick girl's bed nearer to the window.

The sun shone brightly, and the little pea throve, and the sick girl said in the evening, "Mother, I think I shall get well."

The mother tied a piece of string for the little pea plant to climb up, and she hoped that her child might really recover. At last a pea blossom bloomed on the little plant, and the sick girl sat up by the open

window in the warm sunshine, watching the pink pea blossom in full bloom. "God Himself has planted that pea to bring joy to you and hope to me," said the mother; and she smiled at the flower as if it had been an angel from God.

When summer came the sick girl grew strong and well; so the little pea plant had not lived in vain.

Questions.—What did the sick girl see through the window when spring came? What was the tiny green thing? How had it come there? How had it grown? (The warmth of the sun and the moisture of the rain had fed it.) [Show pea shoots growing in pots which have been used for the germination lessons.] What kind of blossom came on the pea plant? What did the pea plant do for the sick girl? (It brought her joy and hope, and it made her well.) What did the mother say?

Recapitulation of the whole. Children are required to narrate the story in their own words.

STEP III.—ASSOCIATION.

Compare the character, aims, and destiny of the five peas. (An association may be made with the story of "The Snowdrop" if the teacher chooses.)

FIRST PEA.	SECOND PEA.	THIRD AND FOURTH PEAS.	FIFTH PEA.
Discontented and restless.	Boastful and proud.	Lazy, careless, and boastful.	Contented and humble.
Wanted to go into the wide world.	Wanted to fly to the sun.	Wanted to go farther than the others.	Wanted to find what work there was for him.
Fell into a gutter.	Fell into the sink.	Eaten by pigeons.	Grew into a beautiful pea blossom.

Which pea was of most use in the world? Why? [Bring out the point that we must do something for others. Even small and humble things may do God's work.]

STEP IV.—FORMULATION.

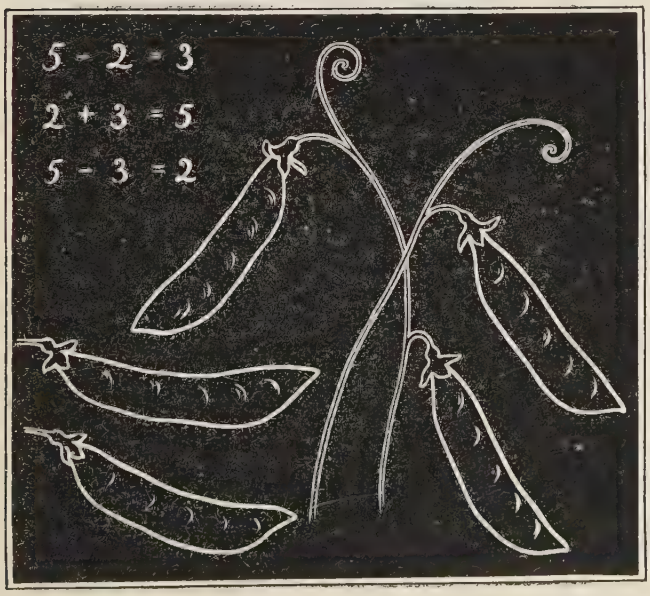
Learn by heart:—

"Content to fill a little space,
If God be glorified."

STEP V.—APPLICATION.

1. **Picture Arithmetic.**—Number 5.

I.



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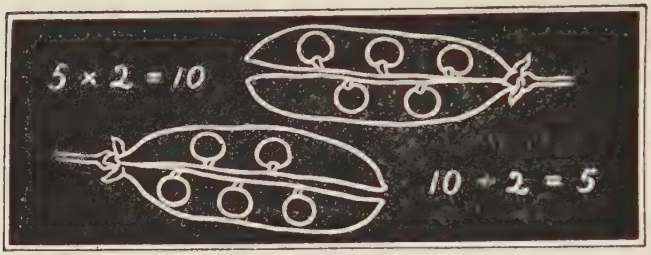
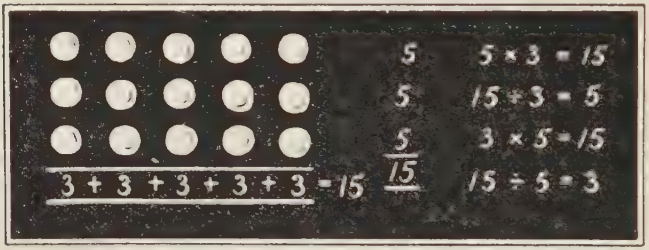


III.



IV.

5 PEAS IN EACH POD.
HOW MANY WHEN THE PODS ARE OPEN?

2. **Brushwork.**—Peas in a pod; pea blossom.

3. **Free Drawing.**—Garret window; pigeons.

4. **Clay Modelling.**—Pea-pod; leaves of pea plant; sick girl's bed and chair.

1. Poems relating to germination:—"How do they Grow?" "Waiting to Grow."

2. Tell simply the story of Theocrite* (Browning's "The Boy and the Angel"), and require children to learn portions which illustrate the point that God values humble services.

> "Morning, evening, noon and night,
> 'Praise God!' sang Theocrite.
> Then to his poor trade he turned,
> Whereby the daily meal was earned.
> Hard he laboured, long and well;
> O'er his work the boy's curls fell.
> But ever, at each period,
> He stopped and sang, 'Praise God!'
> Then back again his curls he threw,
> And cheerful turned to work anew.
> Said Blaise, the listening monk, 'Well done;
> I doubt not thou art heard, my son—
> As well as if thy voice to-day
> Were praising God the Pope's great way.'"

Bring out the point that God was as pleased with the praise of the humble boy as of the great Pope. Refer to the simple work of the pea blossom, and its great results.

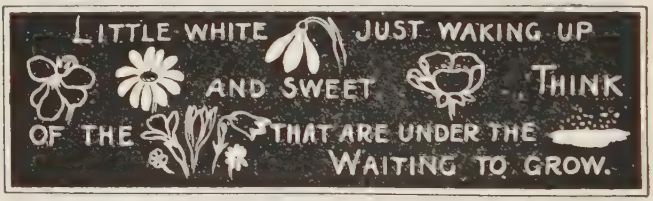
3. Learn by heart "Little by Little," in Selections.

* This will depend on the discretion of the teacher. The writer has told the story of "The Boy and the Angel" to children of six and seven, and has been pleased with the impression it has made.

TREATMENT OF POETRY.

Children delight in poetry. The swing and the rhythm of the verse please their ear, and sometimes they catch unconsciously a deeper thought than their elders suspect. Poetry should be given to them at a very early age—nursery and nonsense rhymes first, and afterwards simple poems about birds, flowers, and the things of nature; for every child is a born naturalist, and he turns to the fields, forests, and sea-shore as naturally as the flowers turn to the sun. Three poems are worked out in detail, and a few poems are added which the child may learn by heart. Fragments from poets such as Shakespeare, Browning, and Blake may be given at a very early age. Strong and beautiful language appeals to them.

Picture Writing on Blackboard for little ones—



Little white snowdrop, just waking up,
Violet, daisy, and sweet buttercup!
Think of the flowers that are under the snow,
Waiting to grow!

And think of the hosts of queer little seeds
Of flowers and mosses, of ferns and of weeds,
Are under the leaves and under the snow,
Waiting to grow!

These illustrations should be done in coloured chalk on the blackboard, and should be the child's own suggestions. He knows best what kind of picture represents the wording to his mind. Sometimes very crude drawings satisfy and help him.

ANALYSIS OF POEM "WAITING TO GROW."

Central Idea: God's Care.

STEP I. PREPARATION.—Analysis of Children's Ideas.

STEP II. PRESENTATION.—
- (*a*) Flowers under the Snow.
- (*b*) Seeds under the Snow.
- (*c*) Roots under the Snow.
- (*d*) God cares for everything.

STEP III. ASSOCIATION.—Comparison with Andersen's story of "The Snowdrop."

STEP IV. FORMULATION.—"God's in His heaven—
All's right with the world."

STEP V. APPLICATION.

STEP I.—PREPARATION.

Aim.—We are going to learn a poem about the seeds waking up in springtime.

Questions.—What month is it now? (February.) What date is it to-day? [Mark on your almanac.] What season is it now? What season was it at Christmas? When the snow melts, what do we find in the fields? (Grass.) What do we find in the fields later? (Flowers.) What kinds of flowers? (Daisies, buttercups, violets, and so on.) Where are these flowers in winter? (Under the ground.) What are they doing?

Recapitulation.

Step II.—Presentation.

(*a*) **Flowers under the Snow.**

Verse I.

Little white snowdrop, just waking up,
Violet, daisy, and sweet buttercup!
Think of the flowers that are under the snow,
Waiting to grow!

Write or print the first stanza on the blackboard, if the children can only read. A little *picture writing* may be used. This interests them very much. Teacher reads the verse first, very slowly and distinctly, and then discusses it.

Questions.—What are we told to think about in this verse? ("The flowers that are under the snow.") What are they doing under the snow? (They are asleep.) What will waken them? (The sunbeams.) [Refer to the story of "The Snowdrop" or "The Story of the Year."] Which flower awakens first? (The snowdrop.) Describe the snowdrop. What do you do when you awake? (Stretch out and get up.) What does the flower do? (Uncurls its tiny shoots and peeps above the earth.) [Show a bean germinating.] When does the violet come? Describe the violet. Describe the daisy and the buttercup. [Draw these flowers in coloured chalks on the blackboard.] Where are these flowers when the snowdrops are peeping up? What are they doing? ("Waiting to grow.")

Require individual children to read the verse, and afterwards to repeat it.

(*b*) **Seeds under the Snow.**

VERSE II.

And think of the hosts of queer little seeds
Of flowers and mosses, of ferns and of weeds,
Are under the leaves and under the snow,
Waiting to grow!

Questions.—What are we to think about in this verse? ("Queer little seeds.") What are seeds? [Show a handful of various seeds—for example, beans, barley, mustard, hemp, poppy, etc. Children examine and discuss them. Some are queer and some little.] What do you mean by *hosts?* (A great many.) What is moss? [Show specimens of damp mosses. Notice the beauty of the little feathery branches.] Where do mosses grow? What are ferns? [Show one. Show how its fronds are getting ready to uncurl.] What are weeds? [Instance chickweed, duckweed, groundsel, and others the children suggest.] Where are all these seeds? ("Under the snow.") What are they doing? ("Waiting to grow.")

Children read and repeat the verse.

(*c*) **Roots under the Snow.**

VERSE III.

Think of the roots getting ready to sprout,
Reaching their slender long fingers about,
Under the ice and the leaves and the snow,
Waiting to grow!

Questions.—What are we to think about in this verse? What are roots? Describe any roots you know. What are the roots doing? ("Getting ready to sprout.") What do you mean by sprout? [Show

a bean or snowdrop bulb sprouting.] What do you mean by slender? Has the root got fingers? Why does the root reach its brown fingers about? (To find food and moisture.) Where are the root's mouths? (At the end of the fingers.) [Blackboard sketch of a root with its fingers.] Where are the roots? (In the earth.) What *leaves* cover them? (Last year's leaves.)

Children read and repeat this verse.

(*d*) **God cares for everything.**

VERSE IV.

Nothing so small or hidden so well
That God will not find it, and presently tell
His sun where to shine, and His rain where to go,
To help them to grow.

Questions.—What makes the flowers, the seeds, and the roots grow? (The warmth of the sun.) [Refer to the story of "The Snowdrop" and "The Story of the Year."] How did the sun help the snowdrop to grow? What do plants need besides sun? (Rain.) How do the roots drink in the rain? (By their little mouths.) Where are their mouths? [Refer to poem "Little White Lily."] Who sends the sun and rain? Does He know where to find all the little seeds? [Refer to the fifth pea hidden in a crack.*]

Children read and repeat this verse.

Revise and re-revise until children know the whole poem.

STEP III.—ASSOCIATION.

Compare the poem with the story of "The Snowdrop," and bring out the point that God takes care of

* If the children have had the story.

everything He has made. Allow children to express this idea in their own words.

STEP IV.—FORMULATION.

Sum up in the words of Browning,—

"God's in His heaven—
All's right with the world."

STEP V.—APPLICATION.

1. **Drawing and Painting.**—Snowdrops and violets.
2. Learn and sing the hymn :—

"All things bright and beautiful,
All creatures great and small,
All things wise and wonderful,
The Lord God made them all.

"Each little flower that opens,
Each little bird that sings,
He made their glowing colours,
He made their tiny wings."

3. **Modelling.**—Bulbs, beans, flower-pots, etc.
4. Learn by heart :—

"Such a starved bank of moss
Till, that May morn,
Blue ran the flash across :
Violets were born!"—BROWNING.

ANALYSIS OF POEM "LITTLE WHITE LILY."

G. MACDONALD

Central Idea: Use of Sunshine and Rain.

STEP I. PREPARATION.—Children's Ideas on the Lily.

STEP II. PRESENTATION.—
- (*a*) The Lily waits for the Sunshine.
- (*b*) The Lily waits for the Rain.
- (*c*) The Lily is strong and cool.
- (*d*) The Lily is happy.

STEP III. ASSOCIATION.—Compare with the story of the fifth Pea.

STEP IV. FORMULATION.—"March winds and April showers
Bring forth May flowers."

STEP V. APPLICATION.

STEP I.—PREPARATION.

Aim.—What is a lily? Of what colour is it? How many kinds of lilies do you know? Describe the lily of the valley. At what time of the year does it bloom? [Refer to the nature study on the lily of the valley.]

STEP II.—PRESENTATION.

(*a*) **The Lily waits for the Sunshine.**

VERSE I.

Little white lily
Sat by a stone,
Drooping and waiting
Till the sun shone.
Little white lily
Sunshine has fed,
Little white lily
Is lifting her head.

Teacher writes or prints the first verse on blackboard. She reads it aloud.

Questions.—Where does the lily live? [Teacher describes a wood in May where lilies of the valley

bloom.] Where was this lily sitting? What was the matter with it? What kind of food did it want? (Sunshine.) What do you mean by drooping? What did the lily do when the sunshine fed it? [Blackboard sketch of the lily "drooping," and of the lily "lifting her head."]

Children are required to compare and contrast the two halves of the stanza. They read the verse, reread it, and tell the story of it in their own words.

(*b*) **The Lily waits for the Rain.**

VERSE II.

Little white lily
  Droopeth with pain,
Waiting and waiting
  For the wet rain.
Little white lily
  Holdeth her cup;
Rain is fast falling,
  And filling it up.

Same method as in (*a*).

Questions.—What is the matter with the lily here? Why is she "drooping with pain"? How do you feel on a hot day? (Thirsty.) How did the lily feel? Why did the lily hold out "her cup"? [Draw the cup of lily on blackboard.] What happened? Where did the rain come from? Do we like rainy days? Do the flowers like them? What would happen if we had no rain? Are there countries where there is no rain? [Teacher describes deserts where animals, flowers, and trees cannot live. Blackboard sketch of lily holding out her cup.]

Revision and reading as before.

(*c*) **The Lily is strong and cool.**

VERSE III.

Little white lily
Said, "Good again,
When I am thirsty,
To have nice rain.
Now I am stronger,
Now I am cool;
Heat cannot burn me,
My veins are so full."

Questions.—Why did the lily say, "Good again"? How did she feel after the rain? What are the veins of the lily? What are your veins? What were in the lily's veins? What are in your veins? How do you feel after a long walk in the hot sun? How do you feel after a nice cool drink? Why was the lily grateful?

Revision as before.

(*d*) **The Lily is happy.**

VERSE IV.

Little white lily
Smells very sweet;
On her head sunshine,
Rain at her feet.
Thanks to the sunshine,
Thanks to the rain,
Little white lily
Is happy again.

Questions.—How did the lily smell? How did she smell when she was tired and thirsty? What brought out the sweet smell of the lily? Who

has been into the garden after a shower of rain? [Let the children describe the freshness and fragrance of the flowers after the rain.] Why did the lily thank the sunshine and rain? How did she show her thanks? (By smelling sweet and by being happy.) Ought we to be happy on rainy as well as on sunshiny days?

Recapitulation.

Step III.—Association.

Compare with the story of the fifth pea. Bring out the points that the rain and the sun made them grow and bloom, and that they thanked them by being sweet and happy.

Step IV.—Formulation.

"March winds and April showers
Bring forth May flowers."

Step V.—Application.

1. Learn to sing "Pitter-patter."

"O you silly little schoolboy,
Did the raindrops never fall,
There would be no bonny roses,
And no strawberries at all."—A. S. Satly.

2. Learn the hymn:—

"He sendeth sun, He sendeth shower;
Alike they're needful for the flower."

3. Drawing, painting, reading, sentence-making, and number lessons.

4. Learn, as companion poem, "The Water Song."

ANALYSIS OF POEM "TWENTY FROGGIES."

Central Idea: How to behave in School."

STEP I. PREPARATION.—Analysis of Children's ideas on Frogs and Schools.

STEP II. PRESENTATION.—
- (*a*) A Frog School.
- (*b*) Rules in a Frog School.
- (*c*) Master Bull-frog the Schoolmaster.
- (*d*) Froggies grow up.
- (*e*) They become wise and clever Frogs.

STEP III. ASSOCIATION.—Comparison between a Frog School and Children's School.

STEP IV. FORMULATION.—Rules in Frog School.

STEP V. APPLICATION.—Language, Number, Drawing, etc.

STEP I.—PREPARATION.

Aim.—We shall learn to-day about the frogs going to school, and the lessons they learned there.

Questions.—What is a frog? What is a baby frog? [Refer to the nature study on the tadpole.] What is a school? What do we learn in a school? Do frogs really go to schools like ours? What kind of school do you think frogs would go to?

Summary of children's ideas.

STEP II.—PRESENTATION.

(*a*) **Frog School.**

Write or print, or sketch in picture writing, the first verse.

VERSE I.

Twenty froggies went to school,
Down beside a weedy pool;
Twenty little coats of green,
Twenty vests all white and clean.

Questions.—How many frogs went to school? Where was the school? What is a pool? What is the difference between a pool and a lake? What do we mean by weedy? Who has seen weeds growing in the water? Are they the same kind of weeds as grow on land? Mention some land weeds. (Chickweed and dockweed.) Some water weed. (Duckweed.) [Show specimens of water weeds from the bowl where the tadpoles are kept.] Why do we put water weeds in with the frogs and tadpoles? (Because they eat them.) What colour are our frogs? (Brown, dirty yellow.) Speckled? (Yes.) And what colour were the frogs that went to school? (Green and white.) Yes: these frogs did not wear real clothes; their backs were green and their chests white. What is a coat? (A garment that covers your back.) And a vest? (A garment that covers your chest.)

RECAPITULATION.—Require children to express the verse in prose.

Twenty little white and green frogs used to go to school every day down by a weedy pool.

Require children to repeat verse by heart.

(*b*) Rules in Frog School.

VERSE II.

"We must be in time," said they.
"First we study, then we play;
That is how we keep the rule
When we froggies go to school."

Questions.—Do you think they were good frogs or bad? (Good.) Why? (Because they came to school in time.) Yes; they never came late, after the bell had ceased ringing. Have you any other reason for

thinking they were good? (They did not play until their lessons were finished.) And they were always careful to keep the rules. What are rules? Have we any rules in our school? Tell me one of the rules. (To come to school early.) Yes; and another? (Not to talk to each other in class.)

Recapitulation in prose and verse.

(c) Frog Schoolmaster.

VERSE III.

Master Bull-frog, grave and stern,
Called the classes in their turn;
Taught them how to nobly strive,
Likewise how to leap and dive.

Questions.—Who was the schoolmaster? What was he like? What do we mean by stern and grave? Were there any other teachers? (No; only Master Bull-frog. He sat on a log in the water, and called the classes up one after another.) [Teacher draws a blackboard sketch of the bull-frog and his classes.] What did Master Bull-frog teach his pupils? (How to strive, and to leap and dive.) What do we mean by strive? (To try.) Yes; we teach the same thing in our schools sometimes. Who remembers how the snowdrop strove against difficulties?

"If you don't at once succeed,
Try, try again."

What do we mean by leap? Do we teach leaping in our schools? What does dive mean? Why do frogs want to learn to leap and dive?

Recapitulate.

(*d*) **Frogs grow up.**

VERSE IV.

Twenty froggies grew up fast,
Bull-frogs they became at last;
Not one dunce among the lot,
Not one lesson they forgot.

Questions.—Do you think the little frogs attended to the lessons? (Yes.) Why? (Because there were no dunces among them. They never forgot their lessons.)

Recapitulate.

(*e*) **They become wise and clever Frogs.**

VERSE V.

Polished in a high degree,
As each froggie ought to be,
Now they sit on other logs
Teaching other little frogs.

Questions.—What kind of frogs did they grow up to be? (Very clever.) Yes, and good as well. What do you mean by polished? [Allude to the polishing of knives and furniture.] Why do we polish these things? (To make them shine.) We call people polished when they are polite and kind and clever. What became of the frogs when they grew up? (They sat on logs in the pool, and taught other little frogs all the good lessons their old master had taught them.)

Recapitulate the whole, and repeat.

STEP III.—ASSOCIATION.

Compare a frog school with our own school.

Frog School.—The master sat on a log in the pool,

and the little frogs sat on stones in classes. They had no books or slates. They learnt to leap and to dive, and to try again when they failed.

The little frogs were punctual—they always came to school in time. They worked hard before they played. They minded their lessons; there was not one dunce among them, and at last they grew up to be well-mannered and well-educated frogs.

Our School.—We sit on a gallery or at desks, in a schoolroom or classroom. We have books, pictures, slates, cubes, and paint-brushes. We learn singing, marching, reading, counting, writing, stories, poems, and nature lessons. We try to learn to be polite and kind, and we hope to grow up to be well-mannered and well-educated boys and girls.

STEP IV.—FORMULATION.

Now, what shall we try to remember about these little frogs?

1. "We must be in time."
2. "First we study, then we play."
3. "Not one dunce among the lot,
   Not one lesson they forgot."

STEP V.—APPLICATION.

1. Language Lesson.—Children are required to give a prose version of the poem.

"There were once twenty little frogs; they had just finished being tadpoles, and they had to learn how to behave like good frogs. So they went to a school kept by a clever old bull-frog in a nice green pool with plenty of weeds. They used to eat the weeds at lunch-time when they were hungry. The Master

Bull-frog was a grave old frog, and he was very strict. He taught the little frogs to come to school in time, and to mind their books. They never played till their lessons were done. The master sat on a log in the water: a log is a piece of wood, and frogs like to sit on logs. Our frog sits on a piece of cork in the bowl. The master taught the frogs to leap and dive, because frogs have to leap to get away from enemies like naughty boys, and they dive to hide themselves. They learned always to try again when their lessons were wrong. The little frogs grew up wise and good. There was not one dunce in the whole twenty; and they never forgot a lesson, for frogs have good memories. They all became clever frogs, and they were all schoolmasters." *

2. **Number Lesson.**—A series of problems on the number 20:—

(1.) If there were twenty frogs in the school, and two classes, how many might there be in each class?

(2.) If there were three classes, how many might be in each class if the classes had equal numbers?

(3.) If there were four classes, how many frogs might be in each?

3. **Drawing.**—Require children to draw original drawings of the froggies in school.

* By a little girl of seven.

POEMS TO BE USED IN CONNECTION WITH THE SCHEME OF LESSONS.

THE MONTHS.

JANUARY brings the snow,
Makes our feet and fingers glow.
February brings the rain,
Thaws the frozen lake again.
March brings breezes loud and shrill,
Stirs the dancing daffodil.
April brings the primrose sweet,
Scatters daisies at our feet.
May brings flocks of pretty lambs
Skipping by their fleecy dams.
June brings tulips, lilies, roses,
Fills the children's hands with posies.
Hot July brings cooling showers,
Strawberries, and gillyflowers.
August brings the sheaves of corn,
Then the harvest home is borne.
Warm September brings the fruit,
Sportsmen then begin to shoot.
Fresh October brings the pheasant,
Then to gather nuts is pleasant.
Dull November brings the blast,
Then the leaves are whirling fast.
Chill December brings the sleet,
Blazing fire, and Christmas treat.

SARA COLERIDGE.

SPRING.

The year's at the spring,
And day's at the morn;
Morning's at seven;
The hillside's dew-pearled;
The lark's on the wing;
The snail's on the thorn:
God's in His heaven—
All's right with the world.—BROWNING.

HOW DO THEY GROW?

This is only a blade of grass;
But how does it grow? Does any one know?
The seasons come, and the seasons pass,
And with every year the grass we have here,
So green and bright in the sun and rain;
And then it is brown when the snow comes down,
But green and fresh in the spring again.

This is only a little girl;
But how does she grow? Does any one know?
With her hair of gold and her teeth of pearl,
From a baby so wee she will grow to be
A maiden as fair as a blooming rose;
And no one can say, as day follows day,
How a blade of grass or a little girl grows.

WAITING TO GROW.

Little white snowdrop, just waking up,
Violet, daisy, and sweet buttercup!
Think of the flowers that are under the snow,
Waiting to grow!

And think of the hosts of queer little seeds
Of flowers and mosses, of ferns and of weeds,
Are under the leaves and under the snow,
Waiting to grow!

Think of the roots getting ready to sprout,
Reaching their slender brown fingers about,
Under the ice and the leaves and the snow,
Waiting to grow!

Nothing so small or hidden so well
That God will not find it, and presently tell
His sun where to shine, and His rain where to go,
To help them to grow.

THE WATER SONG.

Each flower holds up
A dainty cup
To catch the rain and dew;
The drink of flowers
That comes in showers
Is just the drink for you.

The stars so bright,
That gem the night
In the round heaven so blue,
Fling down their beams
Upon the streams
Which flow with drink for you.

The nightingale,
Which charms the vale,
From yonder fountain flew;
The song-bird's drink
Should be, I think,
The drink for birds like you.

HOME THOUGHTS, FROM ABROAD.

Oh to be in England
Now that April's there,
And whoever wakes in England
Sees, some morning, unaware,
That the lowest boughs and the brushwood sheaf
Round the elm-tree bole are in tiny leaf,
While the chaffinch sings on the orchard bough
In England—now!

And after April, when May follows,
And the whitethroat builds, and all the swallows—
Hark, where my blossomed pear-tree in the hedge
Leans to the field and scatters on the clover
Blossoms and dewdrops—at the bent spray's edge—
That's the wise thrush; he sings each song twice over,
Lest you should think he never could recapture
The first fine careless rapture!
And though the fields look rough with hoary dew,
All will be gay when noontide wakes anew
The buttercups, the little children's dower—
Far brighter than this gaudy melon-flower.

ROBERT BROWNING.

A CHILD'S WISHES.

Ring-ting! I wish I were a primrose,
A bright yellow primrose in the spring—
The drooping boughs above me,
The busy bees to love me,
The fern and moss to creep across,
And the elm tree for our king!

Nay, stay—I wish I were an elm tree,
A great, lofty elm tree with green leaves gay!

The sun and moon would glance in,
And birds would house among the boughs,
And sweetly sing.

Oh no; I wish I were a robin,
A robin or a blackbird, everywhere to go—
Through forest, field, or garden,
And ask no leave or pardon,
Till winter comes, with icy thumbs,
To ruffle up our wing.—W. ALLINGHAM.

BEES IN MAY.

A swarm of bees in May
Is worth a load of hay;
A swarm of bees in June
Is worth a silver spoon;
A swarm of bees in July
Is never worth a fly.—*Old Proverb.*

CUCKOO.

Cuckoo
In the cherry tree,
Lay an egg
And bring it me.—*Nursery Rhyme.*

NEST EGGS.

Birds all the sunny day
Flutter and quarrel
Here in the arbour-like
Tent of the laurel.

Here in the fork
The brown nest is seated;
Four little blue eggs
The mother keeps heated.

While we stand watching her,
Staring like gabies,
Safe in each egg are the
Bird's little babies.

Soon the frail shells they shall
Chip, and upspringing,
Make all the April woods
Merry with singing.

Younger than we are,
O children, and frailer,
Soon in the blue air they'll be
Singer and sailor.

We, so much older,
Taller, and stronger—
We shall look down on the
Birdies no longer.

They shall go flying,
With musical speeches,
High overhead in the
Tops of the beeches.

In spite of our wisdom
And sensible talking,
We on our feet must go
Plodding and walking.

R. L. STEVENSON.

By permission of Messrs. Longmans, Green, and Co.

IN A FARMYARD.

Downy duckling dodgy,
Soft as pussy's paw,
When you dived right down to peep
In the duck-pond green and deep,
Tell me what you saw.

Pinky piggie podgy,
  Squealing at your dish,
With your little, curly tail,
Like a little, crooked snail,
  Tell me what you wish.—C. L. Dodd.

THE SNOWDROP.

The ground will soon be whitening—
  Can that be a flake? Why, no,
'Tis a single snowdrop, surely,
  That has dared so soon to blow.

Ah! little, lovely snowdrop,
  Alone on the brown, brown earth,
Who would dream, 'mid these surroundings,
  Such pureness could have birth?

No, gather it not, but leave it;
  It may be born to teach
Some strange and perfect lesson
  No sermon yet could preach.—Ellis Walton.

PRIMROSES.

Children of spring,
We tidings bring:
Birds soon will sing
  That winter's over;
And on the lea
You soon will see
The belted bee
  Amid the clover.

We come to say,
All the long day
Lambs are at play
  Where we were growing;
The city street
We make more sweet,
And there you meet
  Us "all a-blowing."

"Common Wayside Flowers."
By permission of Messrs. Routledge and Sons.

VIOLETS.

Under the green hedges after the snow,
There do the dear little violets grow,
Hiding their modest and beautiful heads
Under the hawthorn in soft, mossy beds.

Sweet as the roses, and blue as the sky,
Down there do the dear little violets lie;
Hiding their heads where they scarce may be seen,
By their leaves you may know where the violet
  hath been.

J. Moultrie.

A VIOLET.

There grew a little flower so shy
  That she could only droop her head;
"The rest are fairer far than I—
  Within the shade I'll hide," she said.

Then floated by, as light as air,
  A butterfly all gold and blue,
And whispered, "In this garden fair
  I find there's none so sweet as you."

Ellis Walton.

DAFFADOWNDILLY.

Sweet Daffadowndilly
Is tall as a lily
And straight as the corn.
Her head is as yellow
As grain that is mellow,
Or chicks newly born.
From the side of the hill,
Where the breezes blow chill,
She looks at the morn.—C. I. Dodd.

THE LARK'S SONG.

A lark flew up from its dewy nest
Beside a meadow daisy,
And swelling its throat, sang loud and clear,
As if with joy 'twere crazy.
"Wake up! wake up!" were the words it sang;
"The world is growing lazy:
In through yon window I peep and see
A maiden soundly sleeping.
Wake up, little girl! don't wait for the sun
To begin his tardy creeping,
Lest for unlearned lessons and tasks undone
At eve you may be weeping."

LITTLE WHITE LILY.

Little white lily
Sat by a stone,
Drooping and waiting
Till the sun shone.

Little white lily
Sunshine has fed,
Little white lily
Is lifting her head.

Little white lily
Droopeth with pain,
Waiting and waiting
For the wet rain.
Little white lily
Holdeth her cup;
Rain is fast falling,
And filling it up.

Little white lily
Said, "Good again,
When I am thirsty,
To have nice rain.
Now I am stronger,
Now I am cool;
Heat cannot burn me,
My veins are so full."

Little white lily
Smells very sweet;
On her head sunshine,
Rain at her feet.
Thanks to the sunshine,
Thanks to the rain,
Little white lily
Is happy again.

GEORGE MACDONALD.

By permission of Messrs. Chatto and Windus.

THE SNOWDROP.

The cowslip has a starry face,
  The violet's blue and tender,
The primrose has a pensive grace,
  The lily's sweet and slender,
The yellow daffodil's straight and tall,
But the wee white snowdrop's best of all.

C. I. Dodd.

VIOLETS.

Such a starved bank of moss
  Till, that May morn,
Blue ran the flash across:
  Violets were born.—R. Browning.

THE VIOLET.

Down in a green and shady bed
  A modest violet grew;
Its stalk was bent, it hung its head
  As if to hide from view.

And yet it was a lovely flower,
  Its colours bright and fair;
It might have graced a rosy bower,
  Instead of hiding there.

Yet it was content to bloom
  In modest tints arrayed,
And there diffused a sweet perfume
  Within the silent shade.

Then let me to the valley go
  This pretty flower to see,
That I may also learn to grow
  In sweet humility.—Jane Taylor.

BIRDS' NESTS.

The skylark's nest among the grass
And waving corn is found;
The robin's on a shady bank,
With oak-leaves strewed around.

The wren builds in an ivied thorn,
Or old and ruined wall,
The mossy nest so covered in
You scarce can see at all.

The cuckoo makes no nest at all,
But through the woods she strays,
Until she finds one snug and warm,
And there her eggs she lays.

The sparrow has a nest of hay,
With feathers warmly lined;
The ring-dove's careless nest of sticks
On lofty trees we find.

Rooks build together in a wood,
And often disagree;
The owl will build inside a barn,
Or in a hollow tree.

The blackbird's nest of grass and mud
In bush and bank is found;
The lapwing's darkly-spotted eggs
Are laid upon the ground.

The magpie's nest is made with thorns,
In leafless tree or hedge;
The wild duck and the water-hen
Build by the water's edge.

The habits of each little bird,
And all its patient skill,
Are surely taught by God Himself
And ordered by His will.—M. S. C.

SPRING SONG.

See the yellow catkins cover
All the slender willows over;
And on mossy banks so green,
Star-like primroses are seen;
And their clustering leaves below,
White and purple violets grow.

Hark! the little lambs are bleating,
And the cawing rooks are meeting
In the elms—a noisy crowd;
And all birds are singing loud,
And the first white butterfly
In the sun goes flitting by.—Mary Howitt.

LITTLE LAMB.

Little lamb,
Here I am;
Come and lick
My white neck;
Let me pull
Your soft wool;
Let me kiss
Your soft face.—W. Blake.

DAME DUCK.

I think it was the best of luck
That I was born a little duck,
With yellow feet and yellow shoes,
Just fit to waddle where I choose.

The boastful cock can strut and scratch,
But for a duck he is no match ;
He cannot splash, nor dive, nor swim—
I would not give a fig for him.

I would not own a son or daughter
With no taste for mud and water,
And for my mate I'd rather take
A pretty sailor, like my drake.

I do believe that, young or old,
A fowl's in dread of catching cold ;
The silly, foolish, sorry scrub,
Afraid to take his morning tub !

WELCOME TO SPRING.

Hark, hark ! with what a pretty throat
Poor robin redbreast tunes his note !
Hark how the jolly cuckoos sing !
Cuckoo ! to welcome the spring—
Cuckoo ! to welcome the spring.—JOHN LYLY.

SWEET VIOLETS.

Violets, violets, sweet March violets ;
Sure as March comes they'll come too,
First the white and then the blue—
Pretty violets !

White, with just a pinky dye ;
Blue, as little baby's eye—
So like violets.

Though the rough wind shakes the house,
Knocks about the budding boughs,
There are violets.

Though the passing snowstorms come,
And the frozen birds sit dumb,
Up spring violets:

One by one among the grass,
Saying, "Pluck me," as we pass—
Scented violets.

By-and-by there'll be so many
We'll pluck dozens, nor miss any—
Sweet, sweet violets.

Children, when you go to play,
Look beneath the hedge to-day;
Mamma likes violets.

Author of *John Halifax, Gentleman*.

THE COW.

The friendly cow, all red and white,
I love with all my heart;
She gives me cream with all her might
To eat with apple tart.

She wanders lowing here and there,
And yet she cannot stray,
All in the pleasant open air,
The pleasant light of day.

And blown by all the winds that pass,
And wet with all the showers,
She walks among the meadow grass,
And eats the meadow flowers.

R. L. STEVENSON.

By permission of Messrs. Longmans, Green, and Co.

THE CUCKOO.

Now daisies pied, and violets blue,
And lady-smocks all silver white,
And cuckoo-buds of yellow hue
Do paint the meadows with delight;
The cuckoo now on every tree
Sings, Cuckoo, cuckoo.—SHAKESPEARE.

OLD RHYME.

The cuckoo's a fine bird,
She sings as she flies;
She brings us good tidings
When hither she hies.
She sucks little birds' eggs
To make her voice clear,
And when she cries Cuckoo,
The summer is near.

AIKIN'S *Calendar of Nature.*

SPRING-TIME.

"Oh, the spring has come," chirped the dear little birds,
As they opened their drowsy eyes,
And shook out the fans in their pretty tails,
And turned up their heads to the skies.

"The spring has come," said each little flower,
As she stirred in her damp brown bed.
First Snowdrop peeped in her neat white cap,
Then modestly hung down her head.

"Oh, there is a bee!" cried Miss Clover so red;
"He's buzzing because I'm not up."
So she sprang into sight with her sweet honey-jars,
And asked Mr. Bee in to sup.

A busy time is this fresh, bright spring,
For birdie and bee and for flowers;
There's work for each in its own little world,
And joy just the same as in ours.—MARY GORDON.

SOW, SEW, AND SO.

Sow, sow, sow—
So the farmers sow!
Busy, busy all the day,
While the children are at play,
Stowing, stowing close away
Baby wheat and rye for bread,
So the children may be fed—
So, so, so.

Sew, sew, sew—
So the mothers sew!
Busy, busy all the day,
While the children are at play,
Sewing, sewing fast away,
So the children may have frocks,
Pinafores, and pretty socks—
So, so, so.—ROSA GRAHAM.

TWENTY FROGGIES.

Twenty froggies went to school,
Down beside a weedy pool;
Twenty little coats of green,
Twenty vests, all white and clean.

"We must be in time," said they.
"First we study, then we play;

That is how we keep the rule
When we froggies go to school."

Master Bull-frog, grave and stern,
Called the classes in their turn;
Taught them how to nobly strive,
Likewise how to leap and dive.

Twenty froggies grew up fast,
Bull-frogs they became at last;
Not one dunce among the lot,
Not one lesson they forgot.

Polished in a high degree,
As each froggy ought to be,
Now they sit on other logs
Teaching other little frogs.

SUPPOSE THE LITTLE COWSLIP.

Suppose the little cowslip
Should hang its golden cup,
And say, "I'm such a tiny flower
I'd better not grow up;"
How many a weary traveller
Would miss its fragrant smell!
How many a little child would grieve
To miss it from the dell!

Suppose the glistening dewdrop
Upon the grass should say,
"What can a little dewdrop do?
I'd better roll away;"
The blade on which it rested,
Before the day was done,
Without a drop to moisten it,
Would wither in the sun.

How many deeds of kindness
A little child may do,
Although it has so little strength,
And little wisdom too!
It wants a loving spirit,
Much more than strength, to prove
How many things a child may do
For others by its love.

LITTLE BY LITTLE.

"Little by little," an acorn said,
As it slowly sank in its mossy bed;
"I am improving every day,
Hidden deep in the earth away."
Little by little each day it grew,
Little by little it sipped the dew.

Downward it sent out a thread-like root,
Up in the air sprang a tiny shoot;
Day by day, and year by year,
Little by little the leaves appear,
And the slender branches spread far and wide
Till the mighty oak is the forest's pride.

MAY.

Now the bright morning star, day's harbinger,
Comes dancing from the east, and leads with her
The flowery May, who from her green lap throws
The yellow cowslip and the pale primrose.

MILTON.

WHERE THE BEE SUCKS.

Where the bee sucks, there suck I:
In a cowslip's bell I lie;
There I couch when owls do cry.
On a bat's wing I do fly
After summer merrily.—SHAKESPEARE.

THE ECHOING GREEN.

The sun doth arise,
And make happy the skies;
The merry bells ring
To welcome the spring;
The skylark and thrush,
And birds of the bush,
Sing louder around
To the bell's cheerful sound;
While our sports shall be seen
On the echoing green.—WILLIAM BLAKE.

A CHILD'S SONG IN SPRING.

The silver birch is a dainty lady,
She wears a satin gown;
The elm tree keeps the old churchyard shady,
She will not live in town.

The English oak is a sturdy fellow,
He gets his green coat late;
The willow is smart in a suit of yellow,
While brown the beeches wait.

Such a gay green gown God gives the larches!
As green as He is good;
The hazels hold up their arms for arches
When Spring rides through the wood.

The chestnut's proud, and the lilac's pretty,
The poplar's gentle and tall;
But the plane tree's kind to the poor dull city—
I love him best of all.

E. NISBET.
By permission of the Author

Part III.

NATURE STUDIES.

1. EGGS AND CHICKENS.

Step I.—Preparation.

Aim.—We shall learn to-day about eggs. Show a hen's egg.

What is an egg? What kind of bird laid it?

Refer to the story of the Ugly Duckling, and to the poems and songs relating to eggs and chickens.

A child may quote,—

"Cluck! cluck! the mother hen
Summons her chickens
To peck the dainty bits
Found in her pickings."

Town children will refer to the boiled eggs at the breakfast table, and to the eggs mother uses in making puddings. Allow the children to express themselves freely upon the subject, and, finally, request them to sum up their ideas in connected narrative.

Recapitulation.*—"Eggs are white; a hen lays

* This summary was given me by a child of six.

them. There are also duck eggs, which are green We make puddings from eggs, and we eat them."

Step II.—Presentation.

Systematic Observation. (*a*) **Colour.**—The hen's egg shell is white, like chalk. Crumble some chalk and some egg-shell, and observe them. Duck eggs are pale green, and sometimes cream-coloured. (Show specimens of duck eggs.) The children remark immediately that duck eggs are a little larger than hens' eggs.

Recapitulation.—Hens' eggs are white. Duck eggs are pale green or cream. They are a little larger than hens' eggs.

(*b*) **Shape.**—Require children to note the form.

The egg is oval or egg-shaped. Refer to the ovals in the outline drawing lessons and the oval shape of some of the leaves. Show a cube, pyramid, and rectangular solid from the Gifts. Show that an oval is a convenient form for the hen to sit upon.

Why should the egg not be round? Because it would roll too easily. Roll a round wooden ball —Gift II. will do for this purpose—and roll an oval egg. Show that the ball rolls much more easily. Round eggs might roll away from the nest.

Recapitulation.—Eggs are oval in shape; they have no sharp corners, and they do not roll away easily.

(*c*) **Egg-shell.**—Break an egg into a basin, and examine the shell. The shell breaks easily. It can be crushed into a powder something like chalk dust. Teach the word "brittle." Examine the inside of the shell. It is lined with a tough white skin. Peel off this skin and examine it.

RECAPITULATION.—The shell is hard and brittle; it is lined with a tough, white skin.

(*d*) **Content of Shell.**—Examine the broken egg in the basin, and notice—(1) the clear, whitish, sticky part outside; (2) the ball of yellow yolk inside.

Take a hard-boiled egg, peel off the shell, and show the white oval. Notice (3) the clear, whitish, sticky part has become firm and quite white. You may now roll it gently about without the shell.

Cut the hard-boiled egg in two, and notice that the yellow yolk has become firm, and paler in colour. Notice that it keeps its position in the centre of the white part.

RECAPITULATION.—The egg is made up of a whitish, sticky part and a yellow yolk. The whitish part becomes firm and quite white when boiled; the yolk also becomes firmer, and paler in colour.

This will probably be enough for one lesson.

STEP II. (*continued*).

Aim.—We shall learn to-day where the chicken comes from.

Hatching. (*a*) **Warmth.**—The mother hen sits on her eggs for about twenty days. Why does she do this? To keep them warm: eggs will not hatch without warmth.

(*b*) **Food.**—The little chick begins to form in the eggs as soon as the mother hen begins to sit on them. Each day it gets bigger. It wants no food; the baby chick feeds on the white and yolk of the egg. Refer to the baby bean plant and baby corn plant feeding on the seeds, and to the baby snowdrops feeding on the bulb, if the children have experience of these.

(*c*) **Feathers.**—On the tenth day the feathers begin to form on the baby chick, and as it grows bigger and bigger, it has to curl itself up to find room for itself inside the egg-shell. After about twenty days it gets tired of the shell, and wants to come out. Refer to the story of the baby snowdrop wanting to uncurl itself.

(*d*) **Coming out of the Shell.**—It begins to tap at the shell with its little beak. It pecks harder and harder, and at last it makes a tiny hole in the shell. This hole gets bigger and bigger, until at last the chick creeps out and sees for itself what the world is like.

(*e*) **The young Chick.**—A strong chicken can run about and pick up corn and worms for itself almost as soon as it comes out of the shell. It is not helpless like little baby brother or sister. (A live chicken should be shown.) It is a pretty little creature, with soft, yellow, downy feathers. If it is frightened or cold, it runs to its mother, and she covers it with her wings and keeps it safe and warm.

Recapitulations are given by the children after each head.

Step III.—Association.

No definite association can be given, as this will in most instances be the first of the series, and the teacher cannot be sure that all the children have sufficient knowledge of any one object to use it as a contrast or comparison. References are made throughout the lesson to the literature—the baby snowdrop wishing to come out of the bulb, and the peas wishing to come out of the pod, and the Ugly Duckling in Andersen's story. The teacher will use the references

which correspond to the order in which he takes the stories. If the flower studies and the germination of the wheat and bean have been taken before the animal lesson, the germination of the bean would make an excellent comparison, and the relationship between the plant and animal world could be established.

The independence of the young chicken as he emerges from his shell can be contrasted with the helplessness of baby at home, or of young kittens or puppies.

STEP IV.—FORMULATION.

This may consist of a general recapitulation.

STEP V.—APPLICATION, AND SUGGESTED CONNECTIONS WITH OTHER STUDIES.

1. The children must draw ovals on the blackboard according to the outline copy I.; if they are already somewhat advanced in the method, they may draw IV. and V., and compare the oval eggs with oval leaves. Children who have had practice for a year or two may draw the chickens and ducklings, if they have seen them.

2. **Brush Drawing.**—Oval eggs. These may be large or small, and may be coloured green, blue, or speckled to represent eggs of various birds. (See Plate III.).

3. **Writing.**—Copy writing with teacher from the board.

The egg is oval, and the shell is brittle.

Language Lesson.—Require various children to make sentences on the egg and chicken, and print their attempts on the blackboard.

EXAMPLE.—Hens lay white eggs. Duck eggs are pale green. Eggs are oval in shape, because an oval is easy for the mother bird to sit on. Egg-shell is brittle; it is lined with tough white skin. Inside the shell are white and yolk. The white is firm when it is boiled. The little chick feeds on the white and yolk until it comes out of the shell, and then it picks up grains and worms for itself.

Reading.—The sentences printed on the board may be used as a reading lesson, and spelling and word-building lessons formed from them.

Word-building. EXAMPLES—

ai	*ee*	*h*
rain	feed	white
grain	need	while
drain	heed	which
train	deed	whom
strain	reed	what
	steed	
	weed	

oi and past tense—

oil	oiled	soil	soiled
boil	boiled	coil	coiled
toil	toiled	foil	foiled

Sentence Writing.—The children may be required to learn to spell various words, and then form sentences, as :—

PRINTED ON BOARD.	WRITTEN BY CHILDREN.
O-val.	*The egg is oval.*
Brit-tle.	*Egg-shells are brittle.*
Easy.	*An oval is easy to sit on.*
Yolk.	*The yolk is yellow.*

2. A STUDY OF THE FROG: FROGS' EGGS.

STEP I.—PREPARATION.

Aim.—To-day we are going to learn about frogs' eggs.

Who knows what a frog is? Where have you seen frogs? What do you know about them?

One small boy may recite:—

"Over in the meadow,
Where the clear pools shine,
Lived a green mother frog
And her little froggies nine.
'Croak!' said the mother;
'We croak,' said the nine.
So they croaked and they splashed
Where the clear pools shine."

Where do the little frogs come from? One child says they drop from the sky when it rains; another says they grow from tadpoles. Where do tadpoles come from? Nobody can tell.

RECAPITULATE.—Frogs live near ponds; they are cold creatures, with four legs and bright eyes. Sometimes they croak. They can live in water. They grow from tadpoles.

STEP II.—PRESENTATION.

Frog spawn is given to each child in a tiny saucer of water, if the class be small; if not, one saucer for each row of children.

(*a*) **Frogs' Eggs.**—What do you see? 1. Little balls of jelly about as big as a pea. 2. Tiny black speck inside each ball of jelly.

These little black specks in the balls of jelly are **frogs' eggs.**

(*b*) **Why Frogs' Eggs are placed in Jelly.**—Require the children to pick up the frogs' eggs which are floating in their saucers of water. This cannot be done because the slippery jelly escapes between their fingers.

1.—Frog Spawn. (Blackboard sketch.)

Why is the jelly there? To keep them warm and to hatch them? Hardly; the sun warms them and hatches them. To keep people from picking them up and stealing them? Yes; and to keep creatures from eating them. Many creatures living near or in ponds love to eat eggs—fish, insects, birds.

All these creatures love eggs. So, in order to protect the frogs' eggs, they are covered with this slippery jelly; and if a bird or a fish tries to eat them, they slip out of its beak or mouth just as they slipped out of your fingers. There is one bird, with a very broad bill, which manages to eat the frogs' eggs—the duck. The bill of the duck is broad, and the eggs do not slip through; hence ducks are great enemies to the young frogs.

RECAPITULATION.—Frogs' eggs are placed in slippery jelly, that birds, fishes, and insects may not eat them. The duck can eat frogs' eggs because he has a broad bill.

(*c*) **Where and when are Frogs' Eggs found?**—In March and April we find frogs' eggs floating on the water in pools and ponds.

Where do frogs' eggs come from? The mother frogs lay them. All through the winter the mother frogs lie asleep at the bottom of the ponds and marshes; and when the sun comes out and thaws the ice, they come up to the top and lay their eggs. How many eggs does the frog mother lay? Hundreds.

Frogs' eggs, young tadpoles, and baby frogs are always in danger of being eaten by birds, fishes, and other creatures, so there are a great many provided.

RECAPITULATION.—Frog mothers lay their eggs during March and April in ponds and shallow pools. The frog mother lays hundreds of eggs. Tadpoles and baby frogs have so many enemies that if there were not many hundreds we should soon have no frogs at all.

STEP III.—ASSOCIATION.

Aim.—Compare frogs' eggs with hens' eggs. Break two eggs into a basin without disturbing the yolks, and notice that they look something like frog spawn.

Hens' eggs:—1. Large. 2. A yellow ball of yolk, enclosed in a sticky kind of clear jelly. 3. A hard shell. 4. A hen sits on ten or twelve eggs to hatch them.

Frogs' eggs:—1. Small. 2. A tiny black ball of yolk, enclosed in a little clear jelly. 3. No shell. 4. Frogs lay hundreds of eggs to be hatched.

STEP IV.—FORMULATION.

Frogs' eggs have a tiny black yolk enclosed in a little ball of clear jelly. Hens' eggs have a large yellow yolk, enclosed in a ball of white, sticky jelly. Frogs' eggs have no shell. Hens' eggs have a hard shell.

STEP V.—APPLICATION.

Language Lesson.—Require children to describe frog spawn. Write and print their descriptions on the blackboard, and use them as materials for reading, writing, and language lessons.

EXAMPLES.—1. **Reading.** One child says:—Frog spawn looks like a slimy mass which contains little black dots. These dots are the frog's eggs. They are made of black yolk.

2. **Word-building and Spelling—**

lawn	*look*	ass	*yolk*
pawn	book	*mass*	folk
dawn	took	pass	
fawn	hook	lass	
sawn	nook	grass	
spawn	rook	class	
		brass	

3. **Writing—**

Frog spawn looks like a slimy mass which contains little black dots.

4. Require children to draw frog spawn (vi. and vii.).

5. Require children to paint frog spawn (xvii.).

6. **Literature.**—Tell the story of the Frog Prince. If reading books are used, choose simple passages relating to the frog for the reading lesson; and require children to learn poems relating to the frog.

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3. TADPOLES.

STEPS I. AND II.—PREPARATION AND PRESENTATION.

Aim.—We shall learn to-day how the young frog is first a kind of fish.

What do you know about frogs' eggs? What do

you think comes out of the frog's egg? Children say, "A little frog." No: it takes some time for the little frog to grow; it must pass through several changes first. One child observes that a "little hen" comes out of the hen's egg. Quite right. What do we call a little hen? A chicken. Yes. What must the mother hen do to hatch the eggs? She must sit on them to keep them warm. Do you think the frog sits on her eggs to keep them warm? The children are doubtful, until one little fellow says, "I know. The sun shines on them." Yes, the sun shines on them and warms them, and so hatches them.

(*a*) **Hatching.**—Provide children with little saucers containing eggs which have been hatching for two or three days, and require them to observe—(1) the little black dots are no longer round; (2) they have become oval in shape. Yes: the little egg is beginning to change.

(*b*) **Tadpoles: First Stage.**—Provide specimens of frog spawn at a later stage, showing the young tadpoles which have just escaped from the jelly-like mass.

FIRST STAGE.
2.—Tadpole at time of hatching.

Require them to notice the little creature. 1. It is black in colour. 2. It has no legs. 3. It has no mouth, only a sucker. 4. There is a swelling in the middle of its body. 5. It has a little tail.

This little creature is a baby *tadpole*. It does not need a mouth yet, because it feeds on the yolk inside its own body. Notice the swelled place in its body. The yolk is in there. These curious-looking little

things cling to the water-weeds, when first they are hatched, and remain there. They do not require legs yet; they have no need to move about.

RECAPITULATION.—The frog's eggs are hatched by the sun. Then they become tadpoles. They are curious-looking little black things with no legs and no mouth. They have a little tail, and a swelled place in their body which contains the yolk on which they feed. They cling to water-weeds.

SECOND STAGE.
3.—Showing gills.

(*c*) **Second Stage.**—Show children young tadpoles at a later stage of development.

Require children to notice—1. The tadpole has got a mouth. 2. It has feathery-like gills which grow from its neck. 3. The little tail has become longer. It now eats very greedily the water-weed to which it clung. Its little jaws are quite hard.

THIRD STAGE.
4.—Appearance of limbs.

(*d*) **Third Stage.**—Show young tadpoles about sixteen weeks after hatching, and notice—(1) the broad, strong tail; (2) the two hind legs with the tiny toes.

(*e*) **Fourth Stage.**—Show specimens a week later, and notice the *front legs*, which were hidden under a fold of skin.

(*f*) **The Baby Frog.**—Show specimens at a later stage, and notice that the tail has shrunk and become

smaller and smaller, and the legs have grown longer. The creature has now become a baby frog.

The tadpole is more like a fish than anything else. It breathes like a fish; it has a tail to help it to swim

FOURTH STAGE.
5.—Tail partially absorbed.

6.—Fully-developed frog.
(Baby frog.)

about; it lives in the water like a fish, and it feeds on water-weeds. When it becomes a frog, it needs to come out of the water sometimes to breathe in the air; and its taste changes, and it wants to catch little flies to eat.

RECAPITULATION.—At first the baby tadpole has no mouth; later, a mouth and gills appear, and it begins to feed on water-weed. In about sixteen weeks it has two hind legs with tiny toes, and soon after its front legs appear. At last the tail shrinks and the legs grow longer, and it becomes a young frog. The tadpole is like a fish; the young frog is not a fish—it can live on dry land.

Step III.—Association.

Compare the early stages of the frog's life with those of the chicken.

1. The chicken is hatched by the warmth of the mother hen.

The tadpole is hatched from the frog's egg by the warmth of the sun.

2. The chicken is perfectly formed when it leaves the egg; it can peck for itself, and run about at once.

The young frog must pass through a fish-like stage which lasts about twenty weeks. At first the tadpole has no mouth or legs, but these gradually develop.

Step IV.—Formulation.

Frogs and chickens come from eggs, and are hatched by warmth. The young chicken is a perfect bird when it comes from the shell. The young frog passes through a fish-like stage which lasts for twenty weeks, during which time it is called a tadpole.

Step V.—Application.

Language Lesson.—Require children to tell the story of the frog's development.

Two stories are appended which were told by twin boys of seven years, who had studied the life history of the frog.

STORY OF BABY FROGS.

BASYL, AGED SEVEN.

First of all we have the frog spawn. Then this develops bigger. The slimy stuff disappears, and funny little black things come. These are called tad-

poles. They are in the fish stage. They are more like fish than anything else. They have tails like fish, which they wag about when they swim. They also breathe by gills. At first they have no legs. By degrees they grow bigger, but still are in the fish stage. When the tadpoles are about eleven weeks old they commence to get legs—two wee, little legs; you can hardly see them. Later on the body grows more oval, and then two arms come out at the top—or rather front legs. Still the tail is very long. After twenty weeks the tail vanishes, and thus a wee, little baby frog is ready.

RONALD, AGED SEVEN.

Spawn look like a slimy mass with little black dots. After a little while these black dots turn into a kind of fish with a long tail, which grows bigger by-and-by. They are now called tadpoles. They grow quickly; head and tail get bigger. After eleven weeks the legs come out; they look just like two little fins. Later on they also get two front legs. They are well able to swim, and look just like frogs with tails. By-and-by the tail grows smaller until only a stump is left, which remains all through life-time. As long as they have tails they breathe by means of gills, and later on they breathe by lungs. Then they grow bigger and bigger until they are quite big frogs, and then they are all right.

Drawing.—Draw tadpoles in various stages. Draw frogs.

Brush Drawing.—Paint frog's eggs; baby tadpoles on weed; young tadpole; baby frog.

Memory or Imaginative Drawing.—If the Nature Studies have been carefully illustrated by the teacher on blackboard, the children can be asked to draw frog spawn, tadpoles, and frogs from memory, or to make pictures of them without copies.

Memory Painting, or Painting from Nature.—Paint the various stages in the development of the young frog.

The studies of eggs and tadpoles may be followed by studies drawn up on the same plan as the following—

The Chicken,	The Duckling,
The Hen,	The Duck,
The Frog,	The Toad—

and a comparison made between the hen and the duck, bringing out the chief differences and resemblances.

These studies may be followed by—

Lambs and Sheep,
Piglings and Pigs,
Calves and Cows,
Foals and Horses;

and the sheep and the pig, and the cow and the horse, may be suitably compared.

Bird studies may be preferred by some teachers, and the commonest and most familiar must be chosen—

House Sparrow,	Hedge Sparrow,
Cuckoo,	Swallow,
Tomtit,	Sand Martin,
Thrush,	Blackbird—

according to the child's environment. Country and rural schools will naturally have the widest choice.

For town schools I should recommend studies on—

1. The Egg, Chicken, Hen;
2. Frog Spawn, Tadpole, Frog;
3. Calves and Cow;
4. Foal and Horse;
5. House Sparrow;
6. Swallow;

or a selection from these.

It cannot be too strongly enforced that it is better to work through two or three studies thoroughly and well than through twenty in a scrappy, general manner; and it is absolutely essential that the children should become perfectly familiar with the real things, and not merely with pictures or drawings. By no means is the value of pictures and illustrations underestimated—they are a necessity in aiding the children to comprehend clearly—but in these early studies a real, concrete foundation is indispensable.

Every town school can procure hens' eggs and a live chicken, frog spawn and tadpoles, and every town child has experience of sparrows, horses, and probably cows.

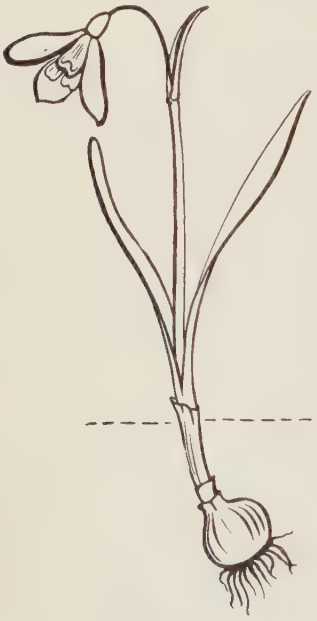
The teacher will always begin with the original source of child's experiences, and the school instruction should correct, arrange, and supplement these experiences.

4. SNOWDROP.

Step I.—Preparation.

Aim.—We shall talk to-day about the very earliest flower of spring.

Have ready a snowdrop carefully taken out of the ground, showing the whole plant, and a bunch of fresh snowdrops and leaves. Provide each child with a flower and a leaf.



Whole plant.

What is this flower? A snowdrop.

Some children remark that it is like a drop of snow, and others that it grows up through the snow.

Encourage the children to talk naturally, and to express their own ideas about the flower, before you settle down to a systematic observation of the plant.

Always insist that the children shall sum up in connected narrative all the ideas brought out before proceeding to Step II.

Step II.—Presentation.

Flower. (*a*) **Colour.**—Pure white, streaked with green. Compare the white of the snowdrop with the white of snow.

(*b*) **Form.**—Double bell-shaped. Each bell made up of three pieces. Outer bell is made up of three white, almost egg-shaped pieces. Inner bell is made up of three smaller pieces, cleft in the middle and tipped with green.

Flower of Snowdrop.

(*c*) **Sheath.**—A green sheath which protects the young bud, but which splits later and lets the white drop hang down. Compare bud and full-blown flower.

Sheath of Snowdrop. Sheath.

(*d*) **Stem.**—Slender, pale green.

RECAPITULATION.—The snowdrop is a pure white flower streaked with green. It is double bell-shaped. Each bell is made up of three pieces. The outer bell has egg-shaped pieces; the inner bell has smaller pieces, cleft in the middle and tipped with green. The bud is protected by a green sheath, which splits and lets the white snowdrop hang down. The stem is slender and pale green.

This will be enough for one lesson.

STEP II. (*continued*).

Aim.—We are going to consider the leaves and bulb of the snowdrop.

Require children to repeat all they know about the

flower. Show the whole plant, and give leaves for examination.

Leaves. (*a*) **Colour.**—A bluish green. Compare with the green grass. The snowdrop leaf has a bluer tint.

(*b*) **Form.**—Long and sword-shaped. Compare with grass and daffodil leaves. Provide children with grass specimens and daffodil leaves, if possible.

Leaf of snowdrop.

Snowdrop bulb and root.

Onion.

Each plant has two leaves, from four to six inches in height. Require children to measure leaves.

(*c*) **Veins.**—Long and straight. Notice the fine straight veins running through the entire length. Compare with daffodil, crocus, and grass leaves.

(*d*) **Bulb.**—Brown. The bulbs grow together in clusters. Each bulb is made up of many coats, which cover and nurse the little plant through the cold

winter underground. Compare with an onion. Cut an onion in two, and show the many coats.

(*e*) **Roots.**—Tiny, fibrous roots, of a whitish-brown colour, at the bottom of the bulb.

RECAPITULATION.—The snowdrop leaves are green, darker than grass. In shape they are long and slender like grass, and the veins are long and straight. The snowdrop has a brown bulb made up of many coats, like an onion. The bulb keeps the tiny plant inside alive and provides it with food. The bulb has little fibrous roots.

STEP II. (*continued*).

Aim.—We shall talk to-day about how the snowdrop grows and blossoms, and where it is found.

(*a*) **Life History of Snowdrop.**—The baby snowdrop lies curled up in the bulb. In January it begins to uncurl. The tiny green shoots often push themselves up through the snow. It is called the "summer fool" in some countries, because it comes so early.

Refer to Hans Andersen's story of the snowdrop.

(*b*) **Time of Blossoming.**—The snowdrop begins to bloom in January, and goes on blooming until the end of March. After the flower dies the leaves grow much higher. The plant rests until the next January.

(*c*) **Where Found.**—In woods, shady places, orchards. The snowdrop is a true wild flower; but it has been introduced into gardens, on account of its beauty, to such an extent that it is almost considered a true garden flower.

(*d*) **Relations of the Snowdrop.**—White narcissus and daffodil.

No comparison is attempted after this lesson. The teacher can give a general summary and proceed to Step V., Application, in which the usual brushwork, drawings, language lessons, poems, songs, etc., can be arranged.

5. THE DAFFODIL.

Step I.—Preparation.

Aim.—We shall talk to-day about one of spring's yellow flowers.

Daffodil plant.

Bunch of daffodils and leaves, and whole plant taken out of the earth, showing bulb and rootlets.

Provide children with flowers, and converse naturally and simply with them, to draw out their ideas on the daffodil. Name the flower. Refer to nursery rhyme,—

"Daffy-down-dilly is come to town
In a yellow petticoat and a green gown."

Step II.—Presentation.

Systematic Observation. Flower. (*a*) **Colour.**—Central part bright, deep, or golden yellow; outer part a pale yellow. Compare with the colour of primrose and buttercup. Scent, slight.

(*b*) **Form.**—Double bell-shaped. An inner bell, made up of one piece, the edges notched and curled; and a loose outer bell, made up of six pieces.

Require children to look inside the inner bell, and to describe what they see. Let them touch the inside of the flower, and get some of the pollen on their fingers. Teach them to call it flower dust.

Daffodil.

(*c*) **Sheath.**—An outer green sheath which encloses the young bud. Notice how the sheath changes colour in the full-blown flower.

(*d*) **Stem.**—Tall and slender, rising from the midst of the leaves and slightly above them, and bearing a single flower. Hollow. Require children to break stem and examine it.

Recapitulate chief points in the lesson, and require several children to repeat what they have learned, observing the flower the while.

Leaf.

Step II. (*continued*).

Aim.—We are going to consider the leaves and root of daffodil.

Require children briefly to recapitulate the previous lesson. Provide them with daffodil leaves for examination.

Leaves. (*a*) **Colour.**—Green; not so pale as the lily of the valley leaves, nor so blue as the snowdrop leaves.

(*b*) **Form.**—Long, sword-shaped leaves. Compare

with snowdrop leaves, and with those of lily of the valley. Point out that they are not so broad as the latter. Veins, long and straight. Compare with snowdrop leaves.

Bulb of daffodil.

(*c*) **Height.**—Require children to measure several of the finest, and show that their height varies from nine to twelve inches.

(*d*) Brown bulb, with a number of strong rootlets.

Recapitulation of chief points.

Step II. (*continued*).

Aim.—When the daffodil blossoms, and where it is found.

(*a*) **Time of Blossoming.**—The daffodil begins to bloom the first week of March, and sometimes in mild weather it may be found at the end of February. It goes on flowering until the middle of April.

(*b*) **Where Found.**—Woods, moist meadows, and sometimes in the shade of the hedges. The flower grows luxuriantly. Perhaps there is no sight more beautiful than a wood or meadow filled with thousands of daffodils in springtime. Require children to learn,—

> "All at once I saw a crowd,
> A host of golden daffodils—
> Beside the lake, beneath the trees,
> Fluttering and dancing in the breeze."

(*c*) **Common Names.**—Daffy-down-dilly or daffy. It is also called narcissus. Refer to the classic myth of the youth Narcissus.

(*d*) **Relations of the Daffodil.**—White narcissus and snowdrop.

Recapitulation of chief points of the lesson.

Step III.—Association.

Aim.—We shall see how the snowdrop and the daffodil are alike, and how different.

Daffodil.	Snowdrop.
Yellow and golden.	White, streaked with green.
Hardly any scent.	Hardly any scent.
Outer bell, six pieces.	Outer bell, three pieces.
Protecting sheath for bud.	Protecting sheath for bud.
Grows about 12 inches high.	About 5 or 6 inches.
Pale-green leaf.	Bluish-green leaf.
Long, slender leaf, about 12 inches.	Long, slender leaf, about 6 inches.
Long, straight veins.	Long, straight veins.
Bulb, brown, with rootlets.	Bulb, brown, with rootlets.
Flowers March to April.	Flowers January to March.
Woods, meadows, and shady places.	Woods, orchards, and shady places.

Recapitulate, noting contrasts and resemblances.

Step IV.—Formulation.

Summary and Generalization.—The daffodil and the snowdrop are relations. They have in common bell-shaped flowers; protecting sheaths; long, slender stems; long, slender leaves with straight veins. Each springs from a bulb which has rootlets. The snowdrop is smaller than the daffodil, its flowers are white, it blossoms earlier, and dies when the daffodil is beginning to bloom.

Step V.—Application.

Application.—Drawing and painting work. Reading, writing, word-building. Learning poems

6. THE PRIMROSE.

Step I.—Preparation.

Aim.—We shall talk to-day about a beautiful pale yellow flower of spring.

A bunch of primroses is shown to the class, and an entire plant carefully taken out of the earth. It must be kept moist with its roots in a glass of water during the lesson, and carefully planted again afterwards. (Children must be encouraged to care for and tend all living things.) The children may name the flower if they can. The teacher must encourage all the children to express their ideas about primroses, and they may repeat any little rhymes they know about primroses. Each child is provided with a primrose.

Primrose plant.

Step II.—Presentation.

Systematic Observation. Flower. (*a*) **Colour.**—A very pale yellow, of a soft tint. It is a curious colour. We know nothing like it, and therefore we speak of a primrose colour. One child suggests that it is like pale country butter; another says it is paler than buttercups. If the children are familiar with sulphur, the primrose may be compared with the sulphur; but no unfamiliar comparisons should be used. The brimstone butterfly is a good comparison,

familiar to country children. The middle of the flower has a rich, deep, clear yellow portion. Compare the two yellows.

Require children to notice the tiny green knob in

Face.

Sheath.

Sheath.

the eye of some of the primroses; but no flower must be destroyed in order to examine it.

(*b*) **Smell.**—The primrose has a sweet smell, which is stronger in a bunch of freshly-gathered flowers than in a single one.

(*c*) **Form.**—A beautiful star-shaped face, and a long, green-golden neck. The starry face is made up of five pieces; each piece is cleft in the middle.

(*d*) **Sheath.**—The neck is enclosed in a pretty green cup or sheath. The green cup has five points.

(*e*) **Stalks.**—Each flower stands on a pretty pale pink stalk, which shades into a soft green tint. Notice that the stalk is slightly hairy. Show the whole plant, and notice how the stalks spring from a strong central root-stem close to the ground.

RECAPITULATION.—Colour, pale yellow, like sulphur, with a deep yellow middle. Sweet smell. Star-shaped flower, with long, green-golden neck. The face made up of five pieces, each piece cleft in the middle. Neck enclosed in a five-pointed green sheath. Pink stalk, slightly hairy, rising from strong central root-stem.

STEP II. (*continued*).

Aim.—What are the leaves and root of the primrose like?

Leaves and Root.—Recapitulate briefly the facts regarding flower and stem, and encourage children to express their ideas on the leaves and root. Provide each child with a leaf. Place the whole plant in a glass of water, in order to observe the root.

Leaf showing midrib.

Leaves. (*a*) **Colour.**—Pale green shading off into a deep green. Compare with the green of the daffodil and the snowdrop.

(*b*) **Form.**—Almost oval or egg-shaped. Compare with the slender leaves of the daffodil and snowdrop.

Wrong side of leaf.

(*c*) **Surface.**—Full of little creases, which give the leaf a crumpled appearance. Notice the strong midrib running through the middle of the leaf, and observe its pale-pink tint underneath. Notice the pale green of the under side, and the network of

veins which branch from the midrib. The veins are little tubes, and they carry juices to feed the plant.

(*d*) **Root.**—Short and thick, with a number of little rootlets running from it. The roots fix plants in the earth, and rootlets suck up moisture.

Root of primrose.

RECAPITULATION. — Leaves green, almost oval in shape; strong pink midrib. Surface of leaf crumpled, under-surface covered with little veins. Root short and thick, with a number of rootlets.

STEP II. (*continued*).

(*a*) **Time of Blossoming.**—The primrose begins to blossom in March; but the best months to find it are April and May. It dies out in May, when the richer flowers of summer begin to bloom.

(*b*) **Where Found.**—The primrose is found on hedge-banks, in woods and copses. It is one of the true wild flowers of England, but is largely introduced into gardens. It grows better, however, in its natural state.

(*c*) **Relations of the Primrose.**—The cowslip is one of the primrose's closest relations of the field. In our gardens we have some flowers closely related to the primrose.

STEP III.—ASSOCIATION.

Aim.—We shall notice how the primrose differs from the daffodil.

Primrose.	**Daffodil.**
Soft, pale yellow, like brimstone [butterfly.	Deep yellow and golden.
Sweet scent.	Faint scent.

Primrose.	Daffodil.
Star-shaped.	Bell-shaped.
Five pieces to form star.	Six pieces to form bell.
Hairy pink stem.	Hollow, smooth green stem.
Cup with five points.	Single-pointed sheath.
Crumpled green leaves.	Smooth green leaves.
Strong pink midrib, and veins [branched.	Delicate straight veins.
Oval-shaped leaf.	Long, slender leaf.
Root short and thick, with rootlets.	Bulb with rootlets.
Blossoms in April and May.	Blossoms in March and April.

Recapitulate chief points of contrast.

STEP IV.—FORMULATION.

Summary or Generalization.—The primrose differs from the daffodil in colour, and in having a sweet scent. The form of the flower and sheath is also different. The leaf of the primrose has branched veins; that of the daffodil straight veins. The primrose has a root; the daffodil a bulb.

Cowslip plant.

STEP V.—APPLICATION.

Usual work.

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7. THE COWSLIP.

STEP I.—PREPARATION.

Aim.—We shall talk to-day about a near relation of the primrose.

A bunch of cowslips, and the whole plant carefully uprooted and placed with its rootlets in a glass of

water. Children are encouraged to name the flower, and to express their ideas about it. Country children will tell you, probably, that it is a fairy flower; that there is soft fairy music from the bells; and that the fairies love to creep inside them.

Discuss the fairy lore of the cowslip with the children, and teach them Ariel's song:—

> "Where the bee sucks, there suck I:
> In a cowslip's bell I lie;
> There I couch when owls do cry.
> On the bat's back I do fly
> After summer merrily."

Ask what it is the bees suck out of the flower; and let the children each suck the tube of a cowslip bell, to taste the sweet juice which the insects love.

Step II.—Presentation.

Systematic Observation. Flowers. (*a*) **Colour.**—Brilliant yellow, with little crimson spots. The sheath which covers the neck of the cowslip is of a very delicate pale-green tint.

Face of Cowslip.

(*b*) **Scent.**—A faint, fresh, sweet scent.

(*c*) **Form.**—A star-shaped bell, something like the primrose, but smaller. Notice that each star is made up of five pieces, and each piece has a crimson spot near the eye of the flower.

Cup.

(*d*) **Cup.**—This forms a large portion of the flower. It is of a yellowish-green colour, and has five points.

(*e*) **Stalk.**—The flowers are on single little stalks which all spring from a point on the main stalk. (Compare to a bunch of keys.) In some places it is called the key-flower.* Cowslips are many-flowered. The primrose and the daffodil never produce more than one flower on the same stem; the cowslip produces many flowers. The number of flowers on a stem varies. Require children to count them, and put each result on the blackboard for comparison. They vary from seven or eight to eighteen or twenty.

Stalk and flower-head.

RECAPITULATION. — Flower brilliant yellow, with crimson spots and pale-green sheath. Faint scent. Star-shaped face, made up of five pieces. Sheath made up of five pieces. Many-flowered stalk. Number on single stalk from seven or eight to eighteen or twenty.

STEP II. (*continued*).

Aim.—We shall talk about the leaf and root of cowslip.

(*a*) **Leaf.**—Green, paler than primrose.

Leaf of Cowslip.

* *Schlüsselblume*, German. *Herb Peter*, in reference to the apostle Peter, who is represented with a bunch of keys.

(*b*) **Form.**—Oval. Compare with primrose. The cowslip leaf is slenderer than that of the primrose.

(*c*) **Surface.**—Crumpled, with strong veins on the underside, and a strong midrib.

(*d*) **Root.**—Firm, thick root with many rootlets.

(*e*) **Time of Blossoming.**—April and May.

(*f*) **Where Found.**—Open meadows and pasture-land.

(*g*) **Stories of Cowslip.**—Relate some fairy lore connected with the cowslip, if the neighbourhood has such. Refer to making cowslip balls.

Recapitulate chief points.

Step III.—Association.

Aim.—We shall see how the cowslip and the primrose resemble and differ from each other.

Cowslip.	Primrose.
Rich yellow with crimson spots.	Pale brimstone yellow.
Faint, sweet scent.	Faint, sweet scent.
Star-shaped face (small).	Star-shaped face (larger).
Five pieces to form star.	Five pieces to form star.
Five-toothed cup.	Five-toothed cup.
Many-flowered stalk.	Single-flowered stalk.
Oval green leaf.	Oval green leaf.
Crumpled surface; strong, branched veins.	Crumpled surface; strong, branched veins.
Firm, thick root and rootlets.	Firm, thick root and rootlets.
Blossoms in April and May.	Blossoms in April and May.
Found in open meadows.	Found in woods and shady places.

Step IV.—Formulation.

Summary or Generalization.—The cowslip and the primrose have a starry face of five pieces, a five-toothed sheath, oval green leaf, with branched veins and crumpled surface, and firm roots and rootlets.

The cowslip differs from the primrose in having a

many-flowered stalk, in having a deeper colour, and in blooming in open rather than shady places.

STEP V.—APPLICATION.

Usual applications.

8. THE SWEET VIOLET.

STEP I.—PREPARATION.

Aim.—To-day we are going to talk about a sweet-smelling blue flower of spring.

A bunch of fresh blue violets, including some white ones, and the whole plant carefully taken up and placed with its roots in a glass of water. Encourage children to name the flower, and talk about it, and to repeat any rhymes they know about it. One child quotes from Jane Taylor:—

Violet plant.

"Where the purple violet blows,
Pretty cow, go there and dine."

Remark that you have a story to tell them about a cow and violets later.

Provide each child with a violet, and proceed to systematic observation.

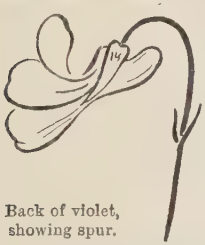
STEP II.—PRESENTATION.

Flower. (*a*) **Colour.**—Deep purple. The colour varies: some are pale blue, some a pale reddish purple

and some pure white. Compare colours of the different flowers, and require children to notice the tiny gold eye in the centre, and the markings on the petals all going towards the centre.

Face of violet.

(*b*) **Scent.**—Children smell the violet, and remark on its fragrance. The violet is loved on account of its sweet smell, and as the flower is modest and loves to hide itself among its leaves, we are often led to it by the scent. Many thousands are gathered and brought into towns for sale because people love the sweet perfume of the violet.



Back of violet, showing spur.

(*c*) **Petals and Shape.**—Get children to count number of petals. There are five. Shape of each petal. It is egg-shaped. [Teacher draws enlarged copy on the blackboard, and colours it.]

(*d*) **Arrangement of Petals.**—The petals are arranged in the form of a star. [Draw on blackboard, and afterwards in coloured chalk.]

(*e*) **Flower Cup.**—Require children to examine back of the flower and tell what they see. There are *five* green leaves to hold the flower. Three form a tiny green cup. Use of cup: to protect the bud or baby flower. [Draw diagram, and show bud enclosed in the cup.]

Bud enclosed in cup.

(*f*) Examine the spur. This contains a tiny drop of sweet juice, which the bees love to find to make into honey.

(*g*) **Flower Stem.**—The stem is green, long, slender, and smooth. Notice how the violet hangs its head like the snowdrop. Observe the single flower on each stalk, and compare with the many-flowered cowslip. Notice the tiny green leaves on the stems above the middle, called bracts, and the little hairs on the stalk.

RECAPITULATION.—Colour: purple, blue, or white; tiny gold eye. Sweet scent. Irregular star shape made up of five pieces, with a curious spur. Flower placed in a green cup made up of five pieces. Flower stem slender and green, bearing a single flower, which hangs its head; slightly hairy; has tiny bracts above the middle.

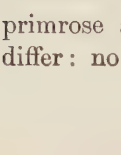
STEP II. (*continued*).

Aim.—We shall examine the leaves and root of the violet.

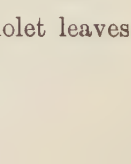
Leaves.—Provide each child with one for examination. Place the whole plant before the class, with the roots in water.

(*a*) **Colour.**—Green; some darker and some lighter. Compare different violet leaves, and compare them with primrose and daffodil leaves. Draw from children differences in shades of colour.

(*b*) **Shape.**—Heart-shaped. Compare with conventional heart shape, and show how exactly the violet leaf agrees. Edges of leaves are not even; they are toothed in a blunt, rounded manner. Compare with the even edges of daffodil and snowdrop, and slightly irregular edges of primrose and cowslip. Notice how the violet leaves differ: no two are exactly alike.



Heart shape.



Leaf.

(*c*) **Surface.**—Examine upper surface. Notice that it is slightly creased, but not so much as the primrose leaf. Notice the under surface. It is downy, being covered with tiny hairs.

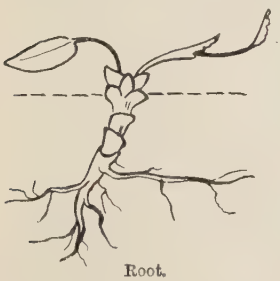
(*d*) **Veins.**—Notice the midrib and branched network of veins. Compare with primrose and daffodil leaves, showing differences and resemblances.

(*e*) **Leaf-stalks.**—Notice the long stalks to the leaf, and contrast with the primrose, cowslip, and daffodil leaves. Notice the attachment of leaf-stalk to root-stock (creeping stem).

(*f*) **Root.**—Thick, whitish brown, giving off many rootlets or runners.

Leaf-stalk.

RECAPITULATION.—Violet leaves are green, heart-shaped, with toothed edges. The leaf is creased; the upper side is smooth, the under has tiny hairs on it. The leaf has a midrib, and branched veins, and a long foot-stalk. The root-stock gives off many runners.



Root.

STEP II. (*continued*).

Aim.—When and where we find the violet.

(*a*) **Time of Blossoming.**—It begins to bloom in very shady places as early as February, and blossoms through March and April. The hot sun of May kills it. Teach the children to repeat—

> "The trembling violet, which eyes
> The sun but once and unrepining dies."

(*b*) **Where Found.**—Woods, copses, banks, and hedges. The violet loves shady places, and it often hides behind larger plants. Teach children to repeat—

"A lowly flower in secret bower
Invisible I dwell;
For blessings made without parade,
Known only by my smell."

(*c*) **Relations.**—The sweet violet, which we have studied, the dog violet, the mountain violet, and others. The pansy of our gardens and the heartsease are near relations of the violet.

Step III.—Association.

Aim.—Compare and contrast the sweet violet and the primrose.

Sweet Violet.	Primrose.
Purple, with golden eye.	Brimstone yellow with deep yellow eye.
Sweet, lasting scent.	Faint scent when fresh.
Irregular starry face of five pieces, with spur.	Regular starry face of five pieces, with long neck.
Green cup of five pieces.	Green cup, five-toothed.
Single flower-stalk, bracts, blossom hanging.	Single flower-stalk, no bracts, blossom erect.
Leaf heart-shaped, edges toothed, long leaf-stalk.	Leaf oval, edges slightly irregular, short leaf-stalk.
Midrib and branched veins.	Strong midrib and branched veins.
Blossoms in March, April, and May.	Blossoms in March and April.
Found in shady places.	Found in woods, moist meadows, and hedges.

Step IV.—Formulation.

Summary and Generalization.—The violet and primrose are alike in having star-like faces of five pieces, flower-cups of five pieces, or five-toothed; in having single flower-stalks, and branched, veined leaves.

They differ in colour and arrangement of flower bracts, shape of leaf and leaf-stalks.

9. DOG VIOLET.

A similar lesson should be given on the dog violet when it is in bloom.

STEPS I. AND II.—PREPARATION AND PRESENTATION.

The following summarizes the chief points: colour, light blue; flower, large and handsome; no scent; leaf, slightly oval; blossoms later than sweet violet, and lasts longer.

STEP III.—ASSOCIATION.

Compare and contrast the sweet violet and dog violet.

RESEMBLANCES.—(*a*) Both have irregular, star-faced flowers in five pieces. (*b*) Both are placed in a green cup of five pieces. (*c*) Both have spurs and bracts. (*d*) Both have branched veins in leaves. (*e*) Both have long leaf-stalks.

CONTRASTS.

Sweet Violet.	Dog Violet.
Colour, purple or white.	Light blue.
Flower, small.	Flower, large and handsome.
Sweet scent.	No scent.
Blossoms early and dies early.	Blossoms later and lasts longer.
Leaf, heart-shaped.	Leaf, more oval.

STEP IV.—FORMULATION.

The dog violet resembles the sweet violet in many ways; but although it has a larger and handsomer

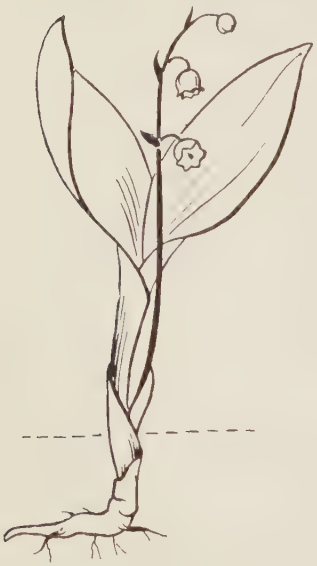
flower, it has no sweet scent, which is the chief charm of the sweet violet.

10. THE LILY OF THE VALLEY.

Step I.—Preparation.

Aim.—We are going to talk about one of the most beautiful of the spring flowers.

A bunch of fresh lilies and leaves, and a whole plant carefully taken out of the soil and placed in water.



Lily of the valley.

Talk naturally about the flower, and encourage children to do the same until you have got them to express their ideas on the flower. Let them repeat a verse of "Little White Lily,"* if they know the poem—

"Little white lily
Smells very sweet;
On her head sunshine,
Rain at her feet.
Thanks to the sunshine,
Thanks to the rain,
Little white lily
Is happy again."

Then lead the children to observe the plant.

* G. Macdonald.

Step II.—Presentation.

Flower. (*a*) **Colour.**—A delicate ivory-white; the buds are of a creamy white. Compare with the white of the snowdrop. Refer to the poet's remark,* "Lilies whiter than the snow."

Flower and bud.

(*b*) **Scent.**—A sweet and delicate perfume. Compare with the perfume of the violet, and notice that the lily loses its fragrance when the flower is dried, while the dried violet retains its scent.

(*c*) **Shape.**—Bell-shaped. Compare with the snowdrop, and notice that the lily bell is smaller and more globular. Each tiny bell-shaped flower is made up of six pieces. Notice the points around the mouth of the bell, and count them. Inside the bell are tiny thread-like things with little yellow specks, but we will not break the pretty bells to look at them. Notice the flower bud, round like a berry.

Stalk and bells.

(*d*) **Stalk.**—Tall, slender, and green. Many-flowered like the cowslip. Notice how the ivory-white bells are arranged on the stalk, and how they droop in a long, one-sided cluster. Require children to count the number of bells on each stalk, and note the result on the blackboard. The average is about ten.

Notice the short flower-stalks attaching the bells to the main stem, and observe the small, pointed leaves where the flower-stalk joins the stem.

* Beaumont and Fletcher's sonnet on the spring.

Notice the flower-stalk coming up from the root. See how it bends over at the top, and causes the flowers to droop on one side.

RECAPITULATION. — Colour, ivory-white; buds, creamy. A sweet scent. Flower, bell-shaped, made up of six pieces. Stalk, many-flowered. Bells placed on tiny flower-stalks, to which are attached tiny, pointed leaves.

STEP II. (*continued*).

Aim.—We are going to examine the leaves and root of the lily of the valley.

Leaf.

Require children to express all they know about flower and stem. Provide each child with leaves, and place the whole plant in a position where it can be viewed by the whole class.

Leaf. (*a*) **Colour.**—Delicate, fresh, pale green; lighter than the other leaves we have noticed, and greener than the snowdrop and daffodil leaves.

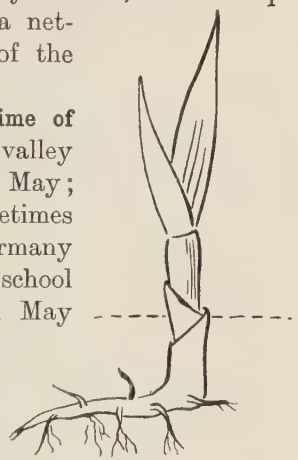
(*b*) **Form.**—Long—broad in the middle, and narrow at the top and bottom. Compare with the long, slender snowdrop and daffodil leaves; also with wheat leaves, if they are sufficiently grown. The leaves grow in pairs; one leaf is often larger than the other. Notice how the leaf-stalks sheathe each other. Edges of leaf even.

(*c*) **Surface.**—Smooth and slightly polished, deeply ribbed.

(*d*) **Veins.**—Straight, as in snowdrop and daffodil leaves; no midrib. The veins may be very clearly

observed in the lily, especially when held up to the light.

(*e*) **Root.**—Fibrous, with many rootlets, which creep under the ground and form a network of roots. Hence lilies of the valley grow in patches.


Root.

RECAPITULATION.—(*a*) **Time of Blossoming.**—The lily of the valley blossoms late in April and in May; on that account it is sometimes called the May lily.* In Germany it is very common to have school excursions into the woods in May to gather lilies.

(*b*) **Where Found.**—In woods and sheltered copses it is commonly found; but it is so beautiful that in England it has become a garden flower. The lily of the valley is more beautiful when it is found growing wild. Nothing can be sweeter than a beech wood in spring with the lilies of the valley growing up from the withered leaves of last year.

Let the children repeat—

> "No flower amid the garden fairer grows
> Than the sweet lily of the lowly vale,
> The queen of flowers."

(*c*) **Relations of the Lily of the Valley.**—The blue wild hyacinth, which is found in the woods in May and June; and Solomon's seal, which grows in cottage gardens.

* Germany, *Maiblume*; France, *muguet de mai*.

Step III.—Association.

Aim.—Compare and contrast the lily of the valley with the snowdrop and the daffodil.

Lily of the Valley.	Daffodil.	Snowdrop.
Ivory-white.	Yellow and golden.	White, green-streaked.
Sweet scent.	Faint scent.	Faint scent.
Bell-shaped (small).	Bell-shaped (large).	Bell-shaped (medium).
Six pieces in bell.	Six pieces in bell.	Six pieces in bell.
No sheath.	Sheath.	Sheath.
Many-flowered stem.	Single-flowered stem.	Single-flowered stem.
Pale, delicate green leaf.	Green leaf.	Bluish-green leaf.
Long leaf, broad in middle.	Slender, sword-shaped leaf.	Slender, sword-shaped leaf.
Straight veins.	Straight veins.	Straight veins.
Many rootlets.	Bulb with rootlets.	Bulb with rootlets.
Blossoms April and May.	March and April.	January to March.
Woods and shady places.	Moist meadows and shady places.	Woods, orchards, and shady places.

Step IV.—Formulation.

The lily is like the daffodil and snowdrop in having bell-shaped flowers in six pieces and long, straight-veined leaves. It differs from them in having a sweet odour, many-flowered stem, and in blossoming at the end of spring.

11. HOW SEEDS GROW.

In order that the children may realize that the whole of nature awakes in spring, a simple study of the germination of seeds is essential.

The seeds may be grown in damp sponges, damp blotting-paper, damp sand, sawdust, or wool. An excellent method is to place coarse canvas over tumblers

of water, so that the middle of the canvas is always wet, and, by placing the seeds on the moist canvas, allow them to germinate.

The teacher should grow a large number of seeds, planting some freshly every day in order to have them in all stages for examination. With small classes, each child should be allowed to grow his own seeds. Peas, beans, and wheat are the best seeds to study, as they germinate even when the conditions are unfavourable.

12. THE LIFE OF A BEAN.

Step I.—Preparation.

Aim.—We shall see how the bean is like an egg.

Encourage the children to express their ideas on the bean plant. Country children who are familiar with growing beans in cottage gardens and in bean fields will have many ideas to express. Town children will know beans as they appear on the dinner table, and will probably have assisted in shelling beans. Sum up children's ideas.

Step II.—Presentation.

(*a*) **Examination of dried beans.**

Provide each child with an ordinary bean for examination, and lead them to observe: (1) thick, smooth, hard, shiny skin; (2) yellowish-green with black stripe; (3) black stripe on the edge of the bean; (4) the two halves of the bean, when it is broken open

Recapitulate, and cause individual children to express these observations in connected narrative.

(*b*) **Examination of beans which have been soaking for some hours in water.**

Observe: (1) that the beans are swollen with the water; (2) the skin is loose and wrinkled; (3) the seam round the bean and the eye are very plainly seen.

Instruct the children how to remove the outer coat or skin very carefully with a large pin, and notice: (1) how easily the two halves separate; (2) the tiny, little curled-up body inside. (Refer to the baby snowdrop curled up inside the bulb, and compare with the pea.)

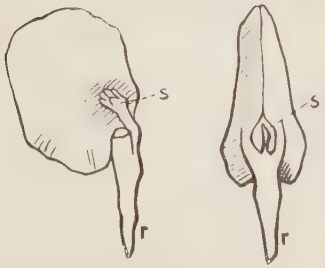
Recapitulate.

(*c*) **Examination of beans that have been planted for two or three days.**

Observe: (1) the skins have burst; (2) two tiny leaves are showing; (3) a little stem is beginning to grow.

Recapitulate.

(*d*) **Examination of beans that have been planted for a week and longer.**



s, First traces of stem; *r*, first small root.

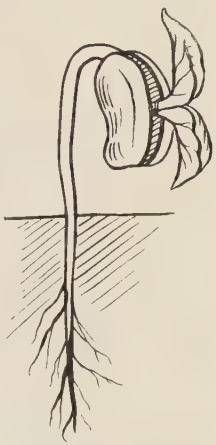
Observe:—1. The two halves of the bean are turning green, and they look like leaves. We call these SEED LEAVES.

Show bean in later stage, and notice how, as the plant grows, these seed leaves shrink up. Why? Because the young plant feeds on them.

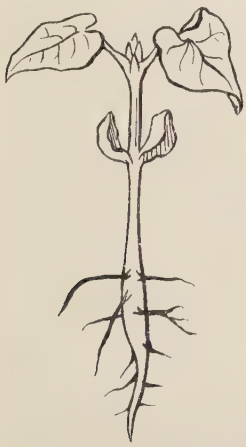
2. The tiny bud is growing upwards.

3. The tiny root is growing downwards.

The young plant is now formed, and the seed leaves shrink up and die away because the plant has eaten up all the food in them. (Refer to young tadpoles feeding on the black yolk of the egg, just as the baby bean plant feeds on the seed.)



When the seed leaves are all eaten up, the young plant begins to take its own food from the soil with its own root mouths. (Refer to the tadpole when it gets a mouth and begins to eat, and to the young chick out of the shell picking up its own food.)



RECAPITULATION.—The bean is oval in shape. It has a smooth, shiny skin, and a black stripe on one edge. It swells when it has been soaked in water, and the skin comes off easily. We can split it open and see the tiny baby bean curled up inside. When it is planted it begins to shoot up two tiny leaves, and a little root begins to grow down. The baby plant feeds on the halves of the bean, which are called seed leaves, just as the baby tadpole feeds on the black yolk of the egg. When the little root-

mouths begin to take in food from the soil, the baby plant grows rapidly.

Step III.—Association.

Aim.—Compare the life of the young bean plant with the life of the tadpole.

Life of Bean.	Life of Tadpole.
The bean plant comes from a seed.	The tadpole comes from an egg.
The seed contains the baby plant and its food.	The egg contains the baby tadpole and its food.
The seed is protected by a tough skin.	The egg is protected by jelly.
The bean requires warmth and moisture to make it grow.	The tadpole requires warmth to make it hatch.
The plant grows slowly, and sends out two tiny leaves and a root.	The animal forms slowly—first, two hind legs, and later two fore legs.
At last it becomes a little bean-plant.	At last it becomes a baby frog.

Step IV.—Formulation.

The bean seed and the frog's egg are alike in containing the baby plant and baby tadpole, and the food to feed them. They are both protected. They both require warmth to make them grow, and they both grow slowly.

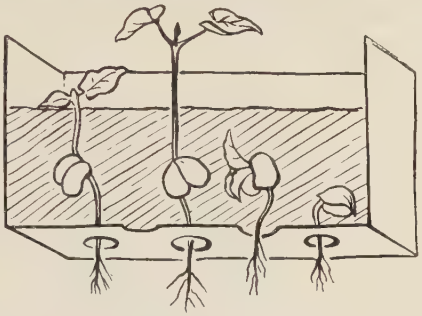
Step V.—Application.

Experiments in Germination.—These experiments form observation and language lessons.

Experiment in germination.

1. Scatter mustard seed on a piece of moist flannel, and keep the flannel wet by placing in a saucer of water. Encourage children to watch the development of the young plants day by day, and to give verbal and written descriptions of the changes which take place.

2. Take an acorn out of its cup, and hang it point downwards into a glass bottle half filled with water. Allow the water just to touch the tip of the acorn. Keep the bottle in a dark place for two or three days, and the young plant will begin to appear. A tiny root of white threads will grow into the water, and a small stem with tiny green leaves will rise into the air. Let the children watch this daily and express their observations.



Experiment in germination.

Language Lesson.—The following sentences were formed by children of six after studying the germination of the bean:—

"This bean is large. It has been in water. Beans become larger in water. The skin is thin. I took the skin from my bean, and I found a baby bean curled up inside. To-day we planted our beans in a pot."

Reading and Writing.—These sentences were printed on the blackboard, used as a reading lesson, and afterwards written in the children's notebooks.

Stories.—Tell the story of Hiawatha's wrestling, and providing food for his people, or Andersen's five peas in a pod; and in connection with this let the children learn the following portions of "Hiawatha," after having grown Indian corn in school. This is not beyond children. I listened to the conversation of children who were painting corn after learning

some extracts from "Hiawatha." They painted the "small green feather" shooting upwards, the "soft yellow tresses," and the "long green leaves" changing to "yellow" with the keenest appreciation and enjoyment.

Learning by Heart.—

"Till at length a small green feather
From the earth shot slowly upward,
Then another and another;
And before the summer ended
Stood the corn in all its beauty,
With its shining robes about it,
And its long, soft yellow tresses.

"Tall and beautiful he stood there,
In his garments green and yellow;
To and fro his plumes above him
Waved and nodded.....

"And still later when in autumn
Changed the long green leaves to yellow,
And the soft and juicy kernels
Grew like wampum, hard and yellow."

Song of Hiawatha.

Require some of the children to draw the various stages in the development from seed to young plant.

13. THE GROWTH OF WHEAT PLANTS.

Aim.—We shall see to-day how the wheat plant is like the bean, and how it is different.

Step I.—Preparation.

Encourage the children to talk naturally and express their ideas on wheat.

Step II.—Presentation.

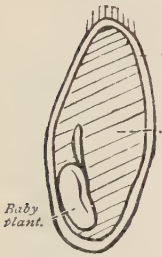
(*a*) **Examination of grains of corn.**

Each child is provided with specimens of grains unsoaked and soaked.

Grain of corn (enlarged).

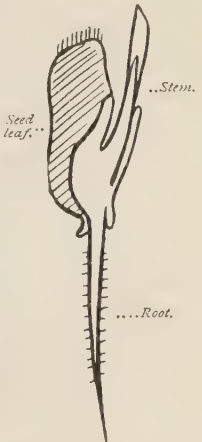
Require them to notice first the dry grain. (1) It is whitish brown in colour; (2) oval in shape, smaller in size than a pea; (3) there is a tiny groove down one side; (4) on the opposite side there is a scar.

(*b*) **Examination of soaked grains.** 1. Notice the same characteristics in a more marked degree. 2. With a pin carefully remove the scar and take out the baby plant.



Section of grain.

Draw section of grain, and note that it consists of (1) outer coat (whitish brown); (2) baby plant; (3) food for baby plant.



Recapitulation.

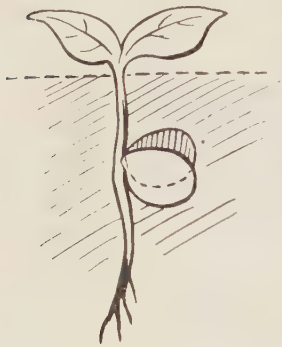
(*c*) **Examination of grains that have been germinating for some days.**

Observe: (1) upward-growing stem; (2) downward-growing root; (3) the grain, or seed leaf. Notice that the wheat seed has only *one* seed leaf.

Refer to baby plant we took out of soaked grain, and remind children that it has grown a root and stem.

(*d*) **Observation of the plant after twenty days' growth.**

Notice: (1) fibrous root with tiny thread-like rootlets; (2) long, narrow, blade-like leaves with straight veins. (Refer to snowdrop, lily, and daffodil leaves.)



Show straws. Remark that they are stems of wheat. Notice the hollow, jointed structure.

General recapitulation.

STEP III.—ASSOCIATION.

Aim.—We shall see how some plants are like the wheat and some are like the bean.

Provide children with bean and wheat seeds, and leaves and blossoms of the plants mentioned in the lesson.

Wheat. 1. **Seed.**—Small and oval, in one piece, containing the baby plant and its food. Refer to snowdrop bulb, and show how it provides food for baby snowdrop in winter.

2. **Leaf.**—Long and narrow, with straight veins. Refer to the leaves of the snowdrop, daffodil, lily of the valley, and blades of grass.

Bean. 1. **Seed.**—Large, oval, in two distinct halves, containing the baby plant and its food.

2. **Leaf.**—The leaf has a midrib and branched veins. Refer to the heart-shaped violet leaf, oval primrose leaf, and show that they have midribs and branched veins.

Step IV.—Formulation.

Some plants are like the wheat in having long, narrow, straight-veined leaves, and flowers made up of six pieces; and many are like the bean in having leaves with midribs and branched veins, and flowers made up of five pieces.

Require children to name different kinds of plants. Specimens may be brought to school, and names written down in a book kept for the purpose.

Part IV.

ART STUDIES.

BRUSH DRAWING.

"I look forward to the time when all teaching of drawing shall be done with the brush."—Alma Tadema.

"The priority of colour to form has a psychological basis which should be recognized from the beginning."—H. Spencer.

The following brush drawings were worked out by a teacher for her young pupils in spring. The children were accustomed to use the brush as a means of expression from the age of four years, and at six their powers were so trained that they used it with considerable facility and nicety. Teachers who have used the brush in teaching drawing to young children are convinced that it is the natural method. What freedom can the lead pencil give the child in comparison with the facile brush? And what is the pleasure of form to the young child in comparison with that of colour?

Mr. H. Spencer affirms emphatically that colouring affords children greater delight than pencil drawing. "Paper and pencil," he says, "are good in default of something better; but a box of paints and a brush—these are the treasures. The drawing of outline im-

mediately becomes secondary to colouring—is gone through mainly with a view to colouring."

The aim of brush drawing is to develop the child's powers of observation, inventiveness, and imagination, to train the hand and eye, and to add interest to the other studies. The child delights in producing pictures of familiar natural objects, and the power of making coloured drawings from what is *seen* is an invaluable preparation for scientific studies later.

The teacher must not worry the child to produce neat, finished copies. Much of the work at the outset will naturally consist of smudges. But these smudges are training the child to use his fingers and his eyes. "No matter how grotesque the shapes produced," says Mr. H. Spencer; "no matter how daubed and glaring the colours. The question is not whether the child is producing good drawings. The question is whether it is developing its faculties."

The children should be introduced at an early age to the studies of the field; and the nature teaching and brush drawing are mutually helpful. Show the child the whole plant first in all its perfection; then discuss its parts, pointing out its grace, beauty, and fitness for its place and its work in the world. Children at a very early age learn to appreciate the beauty of a flower. The colour, form, and arrangement of leaves please their æsthetic sense. They love to handle the flower, to smell it, to paint, draw, and model it in clay, and these exercises train their powers of observation as well as their artistic sense. The connection of the nature study with literature, with descriptions from the poets and from the Bible, helps to deepen in the child the feeling of reverence and

beauty. Especially should the nature teaching bring out the fitness of things, and help the child to realize the exquisite construction of the nest, the fitness of the oval form of the egg, the geometrical beauty of the honeycomb and the spider's web, and the use of the jelly in the frog spawn.

The following studies are suitable for children of six or seven years who have already been trained to hold the brush and use colour.

The teacher must go to nature for her studies. "Do not copy merely, but originate, invent, educate."

The snowdrop should be taken as an application of the nature study on the snowdrop and in connection with Andersen's story of the snowdrop. The children have seen the flower, handled it, described its colours, form of flower, leaves, stem, sheath, bulb of rootlets, and their attitude towards the snowdrop is one of intelligent appreciation; hence they will be eager to paint it.

The violet, cowslip, daffodil, primrose, and lily of the valley should be painted in like manner at the time when the children's attention is concentrated on these flowers.

The studies are merely given as suggestions, and not as copies to be rigidly followed. The teacher may select the simple flower and leaf as sufficient for her class, and omit the whole plant, which offers certain difficulties. She may then allow the children to arrange the flowers and leaves in a kind of design, according to their fancy. The teacher who drew up these studies found it desirable to let her pupils paint the whole plant, and she found that the exercise was not beyond their capacities.

The chickens coming out of the eggs may be omitted. In the case in question the teacher and her pupils had watched the process in a farmyard, and it seemed desirable to paint it.

The *real* objects should always be observed before the children are required to paint them. There is no difficulty with the flowers; these can be provided or grown in the schoolroom. In the case of chickens, ducklings, lambs, pigs, etc., a walk in the country should be taken to a farmyard, if possible. In large towns, where this is impossible, the teacher must be contented with securing the best pictures. Dead flowers or animals should never be shown to the children. The tadpoles can always be kept in school, and the beans and wheat can germinate there also. It ought not to be impossible to bring a live chicken and a live duckling in a little cage to be examined by the children. (For the method of teaching brush drawing, teachers are recommended to get a manual on the subject, and to read "A B C of Drawing," by Mr. E. Cooke, in Vol. I. of Mr. Sadler's Special Reports.)

DRAWING.

"I drew men's faces on my copy-books."—BROWNING.

"Drawing shows itself in its essential characteristic as a spontaneous, self-taught activity of childhood, which takes its rise in the play impulse.

"A child's first attempts at drawing are pre-artistic and a kind of play."—SULLY.

"Whatever a child already knows from what life gives and needs he puts into his drawing."—FROEBEL.

"The spontaneous attemps made by children to represent the men, houses, trees, and animals around them—on a slate if they can get nothing better, or with lead pencil and paper if they can beg them – are familiar to us all."—H. SPENCER.

Drawing is one of the things which can never be done as well if withheld until the child is a child no longer. He must go through the early stages in his impressionable years, at the time when he wants to draw, and then it becomes second nature to him.

Mr. Sully tells us that little children's first attempts to draw a man begin with a clumsy kind of circular or oval form, which is intended to represent a front view of the head. "It has been wittily observed," he says, "by an Italian writer on children's art, that they reverse the order of natural creation, in beginning instead of ending with man." * As soon as the child can scribble a line, his natural inclination leads him to draw ovals and circles. The rational teacher will let him have his will, and encourage him to draw

* Studies of Childhood.

ovals and circles and to combine them, and so form simple natural objects. The child is interested in the animal and plant life of spring, and he will be quite eager to reproduce simple outlines of the flowers and creatures of the season, especially if the teacher has illustrated the lessons sufficiently on the blackboard.

As the oval is perhaps the easiest form to draw, we begin with it.

The children must practise drawing large ovals first on the blackboard, going over and over the same oval again and again. They should draw from the shoulder, taking care not to use fingers and wrist only, as in writing and ordinary drawing. When the child can represent ovals fairly, he may practise circles and spirals in the same way.

The teacher must not expect too much from the child. His early attempts will certainly be clumsy and inaccurate. The aim here, as in brush drawing, is to develop power, and not to produce finished drawings. The ovals may be developed into birds' nests and eggs, as in IV. These studies must be made in connection with nature studies on birds' nests and eggs and learning poetry on nests.

All the flower and animal forms introduced are developed from ovals and circles; therefore it does not matter in which order they are taken, provided the simpler studies are chosen first. The frog studies, VI. and VII., are fairly easy, and the frog and tadpole are usually attractive subjects with young children. I have seen children of five and six drawing with the keenest pleasure the frog snapping at the fly on VII. The nature study on the frog, and the story of the Twenty Froggies, are to be worked through before the

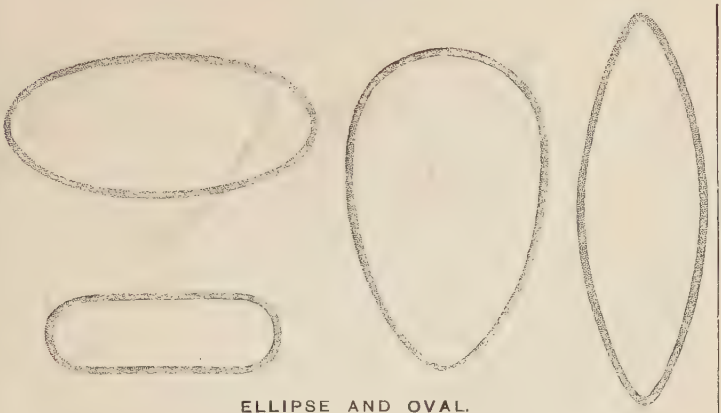
children attempt the drawings. The duckling and the chicken are intended to be used in connection with the study of the hatching of chickens and the Ugly Duckling story. Pigs, lambs, calves, sparrows, and other creatures of spring can be introduced at the teacher's discretion. The child's environment is a safe guide to the teacher in choosing suitable subjects.

With regard to the flower studies, the simple single flowers and leaves only need be drawn; but if time permit, it is well that the children should learn to draw the whole plant.

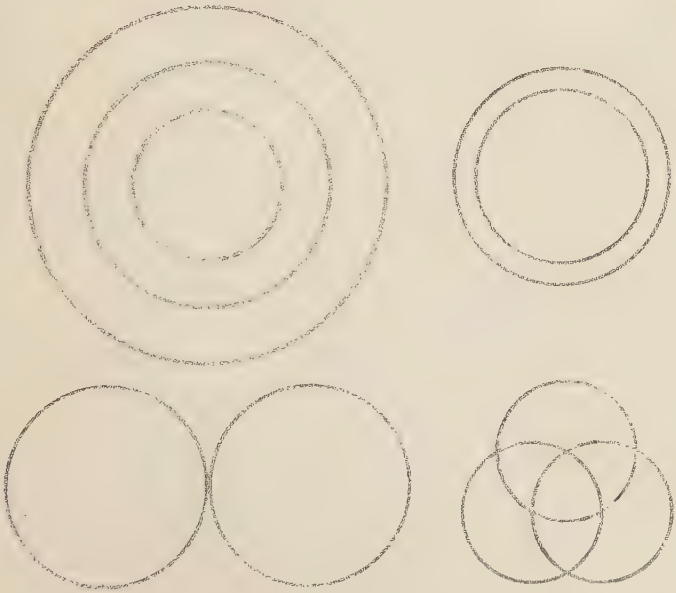
PENCIL OR CHALK STUDIES

PLATES

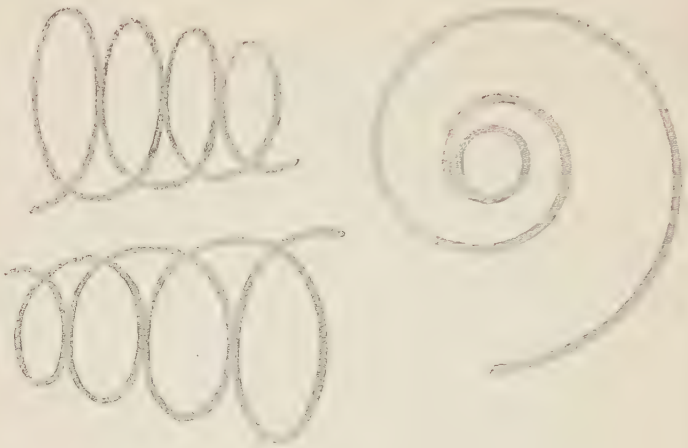
PLATE I.



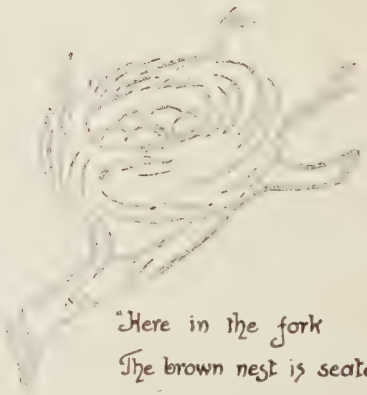
ELLIPSE AND OVAL.



CIRCLE.



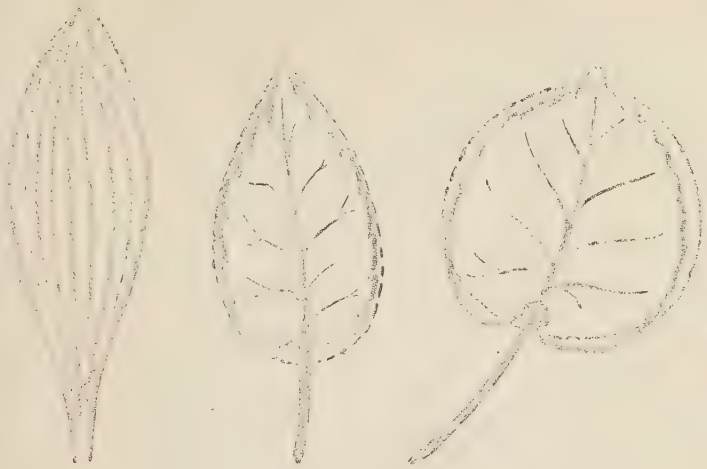
SPIRAL.



"Here in the fork
The brown nest is seated.
Five little blue eggs
The mother keeps heated."

BIRD'S NEST.

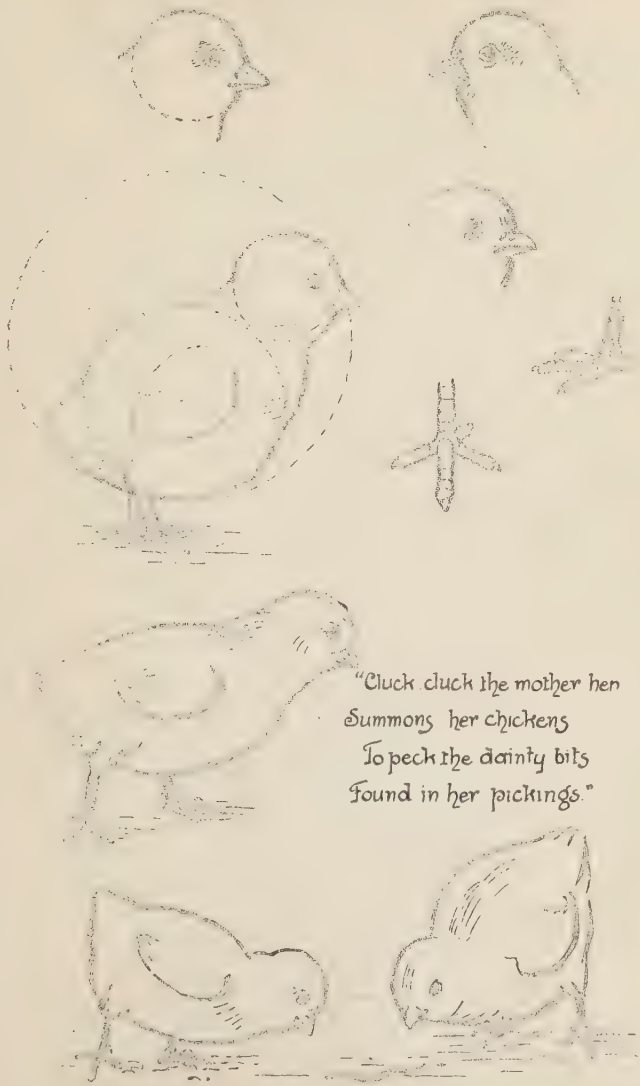
PLATE III.



LEAF STUDIES.

TADPOLE STUDIES.

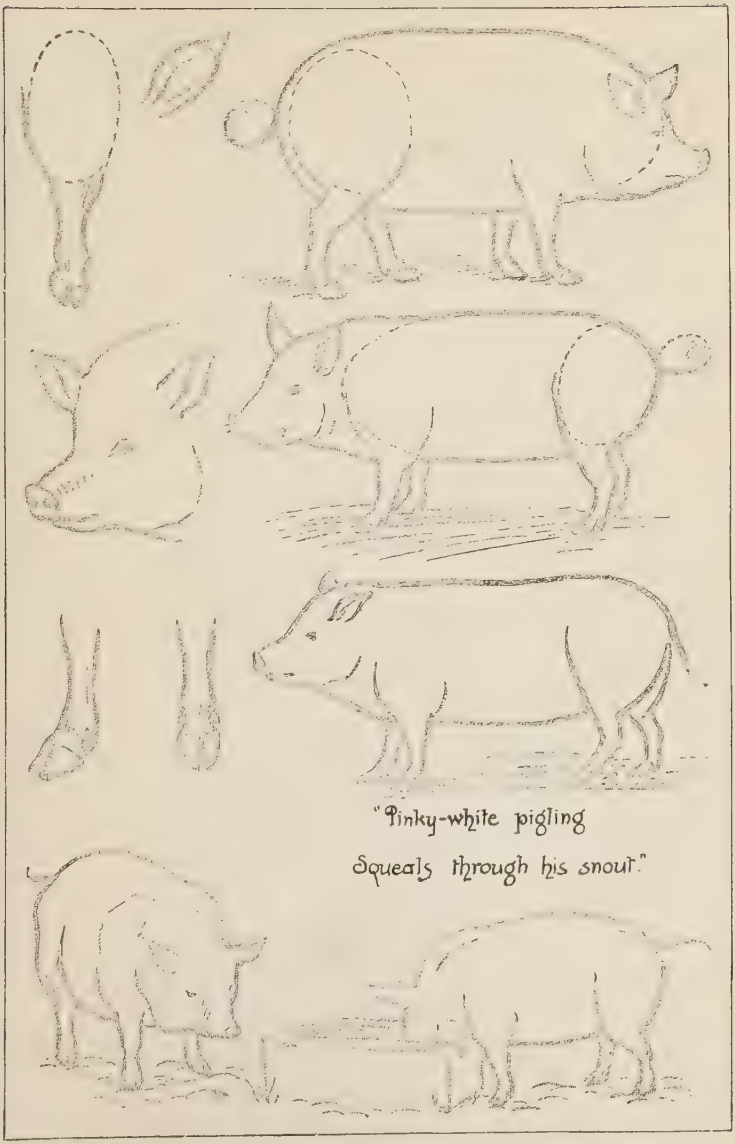
THE FROG.



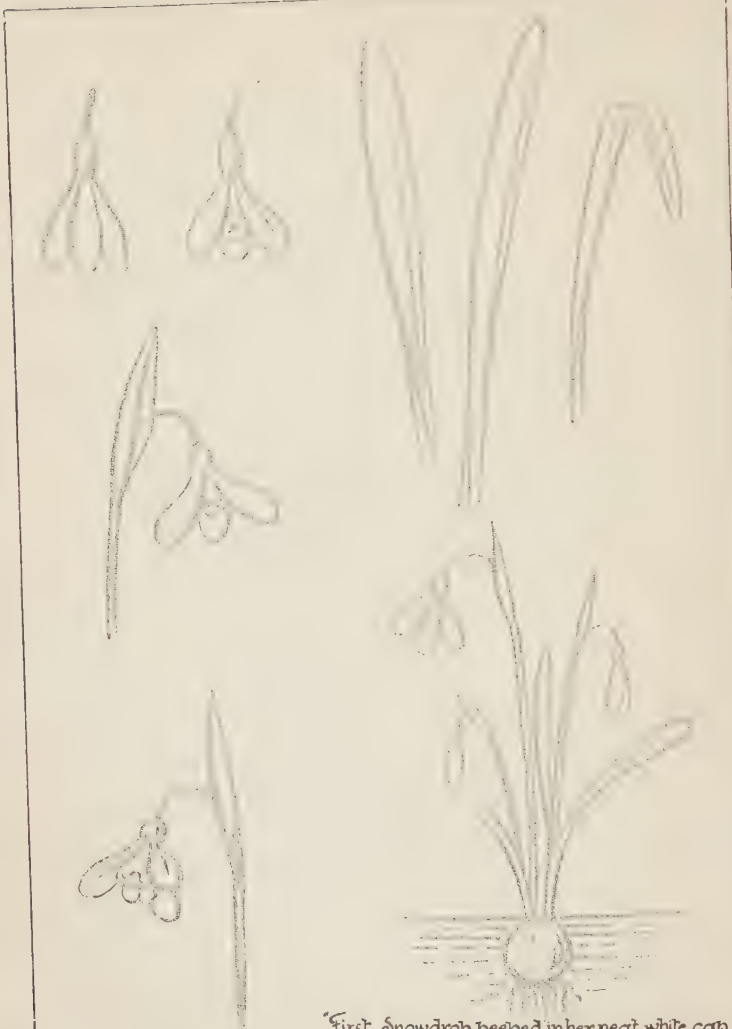
CHICKEN STUDIES.

"I think it is the best of luck
That I was born a little duck,
With yellow feet and yellow shoes
Just fit to waddle where I choose."

DUCKLING STUDIES.



PIG STUDIES.

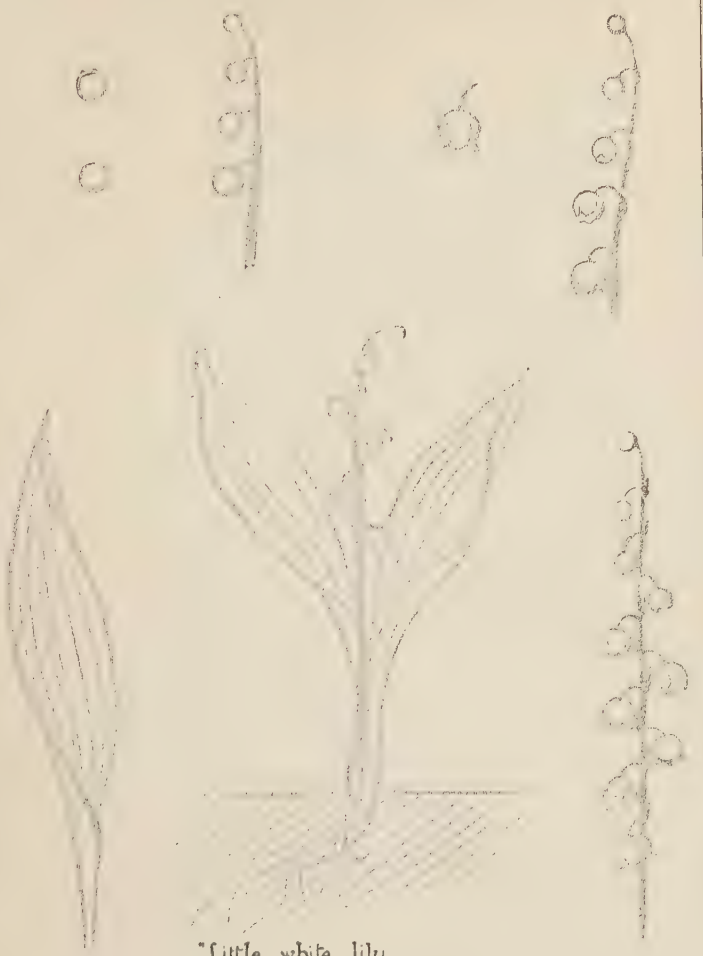


"First, Snowdrop peeped in her neat white cap.
Then modestly hung down her head."

SNOWDROP STUDIES.

VIOLET STUDIES.

DAFFODIL STUDIES.



"Little white lily
Sat by a stone
Drooping and waiting
Till the sun shone."

LILY STUDIES.

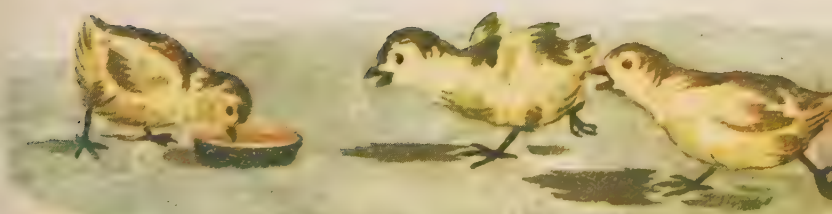
COLOUR STUDIES

PLATES

PLATE I.

"Safe in each egg are
The birds little babies"

"Ducklings all downy soft
Yellow as gold"



"Three speckled chickens
As plump as plump can be"

Woolly white lambkin
Frisks all about

The lily has an air
And the snowdrop a grace

But there's nothing like the rose
When she blows

"Little white snowdrop.

Blue ran the flash across

PLATE IX.

PLATE X.

PLATE XI
April brings the primrose sweet.
"Violets and primroses
And fair little May."

PLATE XII.

PLATE VIII.

March brings breezes
loud and shrill
Stirs the dancing
daffodil."

PLATE XV.

roots getting
ready to sprout
Reaching their slender
brown fingers about
"Baby wheat & rye
for bread
So the children may
be fed"

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